```
=> d his

     (FILE 'HOME' ENTERED AT 08:37:45 ON 27 OCT 2000)

     FILE 'REGISTRY' ENTERED AT 08:37:56 ON 27 OCT 2000
L1             STR
L2           0 S L1
L3             STR L1
L4           0 S L3
L5             STR L1
L6          50 S L5
L7             STR
L8          31 S L7
L9             STR
L10         50 S L9
L11         35 S L5 OR L7 OR L9
L12         50 S L5
L13         31 S L7
L14         50 S L9
L15            STR L3
L16         11 S L15
L17          2 S L3 OR L7 OR L9
L18          0 S L3
L19         31 S L7
L20         50 S L9
L21            SCR 1840
L22          2 S L3 OR L7 OR L9 AND L21
L23      48190 S NC4-C6-C6/ES
L24     437299 S NC4-C6/ES
L25      43898 S NCOC2-C6/ES
L26     430781 S (L23 OR L24 OR L25) AND NRS>1
L27        826 S NC4-NC4-BNC3N/ES
L28       1805 S OC5/ESS(S)C6/ESS(S)NRRS>2 AND N>1 AND S>1 AND O>6
L29     433325 S L26 OR L27 OR L28
L30         28 S L3 OR L7 OR L9 SSS SAM SUB=L29
L31       1193 S (L3 OR L7 OR L9) AND L21 SSS FUL SUB=L29

     FILE 'CAPLUS' ENTERED AT 09:03:06 ON 27 OCT 2000
L32       1618 S L31

     FILE 'REGISTRY' ENTERED AT 09:03:19 ON 27 OCT 2000
L33          3 S L3 SSS SAM SUB=L31
L34            STR L3
L35          0 S L34 SSS SAM SUB=L31
L36            STR L7
L37          0 S L36 SSS SAM SUB=L31
L38            STR L9
L39            STR L38
L40            STR L38
L41            STR L40
L42            STR L40
L43          0 S L34 OR L36 OR L38 OR L39 OR L41 OR L42 SSS SAM SUB=L31
               SAV L31 PONN448/A
               SAV L43 PONN448B/A
L44         29 S L34 OR L36 OR L38 OR L39 OR L41 OR L42 SSS FUL SUB=L31
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     FILE 'CAPLUS' ENTERED AT 09:44:28 ON 27 OCT 2000
L45         132 S L44

     FILE 'REGISTRY' ENTERED AT 09:44:40 ON 27 OCT 2000
L46          26 S L44/COMP

     FILE 'CAPLUS' ENTERED AT 09:48:15 ON 27 OCT 2000
L47         129 S L46

     FILE 'REGISTRY' ENTERED AT 09:49:15 ON 27 OCT 2000
L48           1 S  146368-14-1
L49           1 S  146368-16-3

     FILE 'CAPLUS' ENTERED AT 09:52:39 ON 27 OCT 2000

     FILE 'HCAPLUS' ENTERED AT 09:52:47 ON 27 OCT 2000
L50         129 S L46

     FILE 'REGISTRY' ENTERED AT 09:52:59 ON 27 OCT 2000

     FILE 'HCAPLUS' ENTERED AT 09:53:38 ON 27 OCT 2000
L51          27 S L50 AND (COMBIN? OR ARRAY OR LIBRAR?)
L52           7 S L50 AND (?COLLECT? OR RECOMBIN?)
L53           5 S L50 AND (?LIBRAR? OR PLANAR(4A)ARRAY)
L54          11 S L50 AND HIGH(4A)THROUGH?
L55          37 S L51-L54
L56          10 S L50 AND ?ARRAY?
L57           1 S L56 NOT L55

     FILE 'CAOLD' ENTERED AT 10:03:32 ON 27 OCT 2000
L58           0 S L46

     FILE 'BIOSIS, MEDLINE, USPATFULL' ENTERED AT 10:04:06 ON 27 OCT 2000
L59          22 S L46
L60          17 S L59 AND (COMBIN? OR RECOMBIN? OR ARRAY OR MICROARRAY?)
L61          16 S L59 AND (LIBRAR? OR COLLECT? OR HIGH(3A)THROUGH?)
L62          18 S L60 OR L61
L63          18 DUP REMOV L62 (0 DUPLICATES REMOVED)

     FILE 'REGISTRY' ENTERED AT 10:09:01 ON 27 OCT 2000
           SAV L44 PONN448B/A
```

26 compounds

129 cites

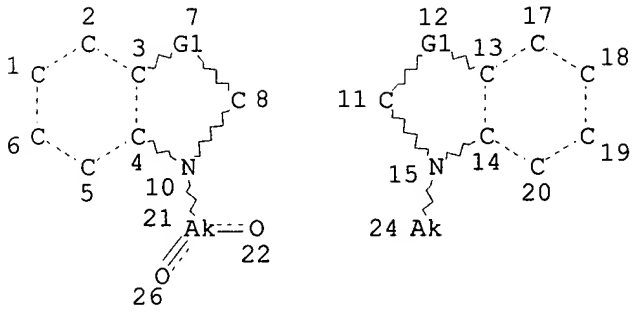
38 cites with method

ø hits

18 patents with utility.

=> d que 144

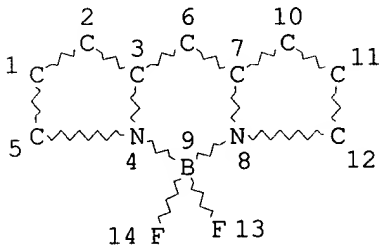
L3 STR



VAR G1=O/C
NODE ATTRIBUTES:
CONNECT IS E3 RC AT 8
CONNECT IS E3 RC AT 11
CONNECT IS E3 RC AT 21
CONNECT IS E1 RC AT 24
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 22

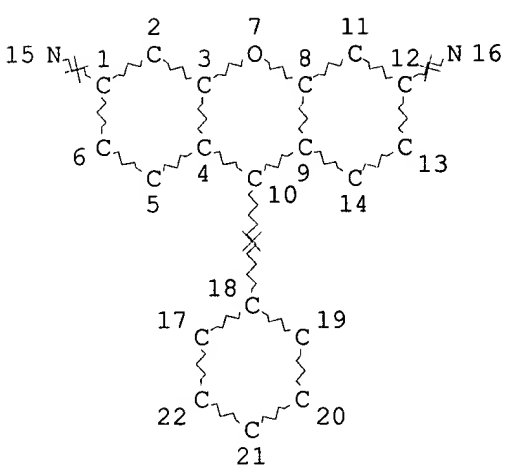
STEREO ATTRIBUTES: NONE
L7 STR

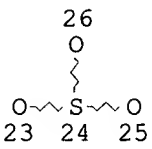


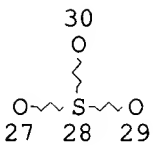
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RSPEC I
NUMBER OF NODES IS 14

STEREO ATTRIBUTES: NONE
L9 STR





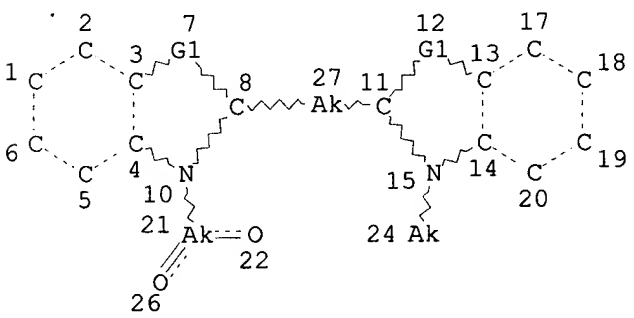


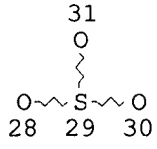
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

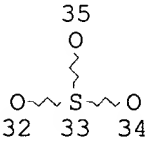
GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 30

STEREO ATTRIBUTES: NONE

| | | | |
|---|---|---|---|
| L21 | | SCR 1840 | |
| L23 | 48190 | SEA FILE=REGISTRY ABB=ON | PLU=ON NC4-C6-C6/ES |
| L24 | 437299 | SEA FILE=REGISTRY ABB=ON | PLU=ON NC4-C6/ES |
| L25 | 43898 | SEA FILE=REGISTRY ABB=ON | PLU=ON NCOC2-C6/ES |
| L26 | 430781 | SEA FILE=REGISTRY ABB=ON | PLU=ON (L23 OR L24 OR L25) AND NRS>1 |
| L27 | 826 | SEA FILE=REGISTRY ABB=ON | PLU=ON NC4-NC4-BNC3N/ES |
| L28 | 1805 | SEA FILE=REGISTRY ABB=ON | PLU=ON OC5/ESS(S)C6/ESS(S)NRRS>2 AND N>1 AND S>1 AND O>6 |
| L29 | 433325 | SEA FILE=REGISTRY ABB=ON | PLU=ON L26 OR L27 OR L28 |
| L31 | 1193 | SEA FILE=REGISTRY SUB=L29 | SSS FUL (L3 OR L7 OR L9) AND L21 |
| L34 | | STR | |





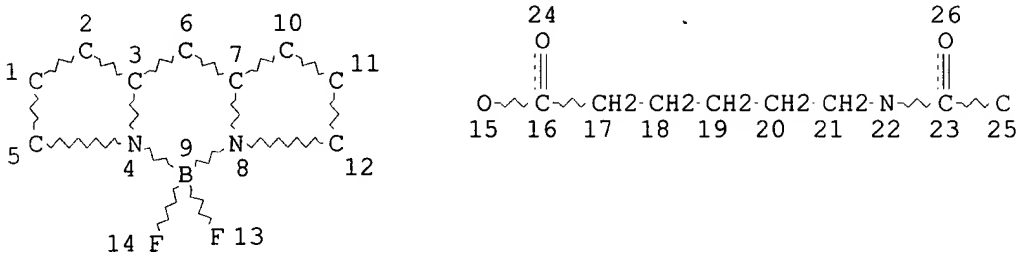


VAR G1=O/C
NODE ATTRIBUTES:
CONNECT IS E3 RC AT 8

CONNECT IS E3 RC AT 11
CONNECT IS E3 RC AT 21
CONNECT IS E1 RC AT 24
DEFAULT MLEVEL IS ATOM
GGCAT IS UNS AT 27
DEFAULT ECLEVEL IS LIMITED
ECOUNT IS E6 C AT 21

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 31

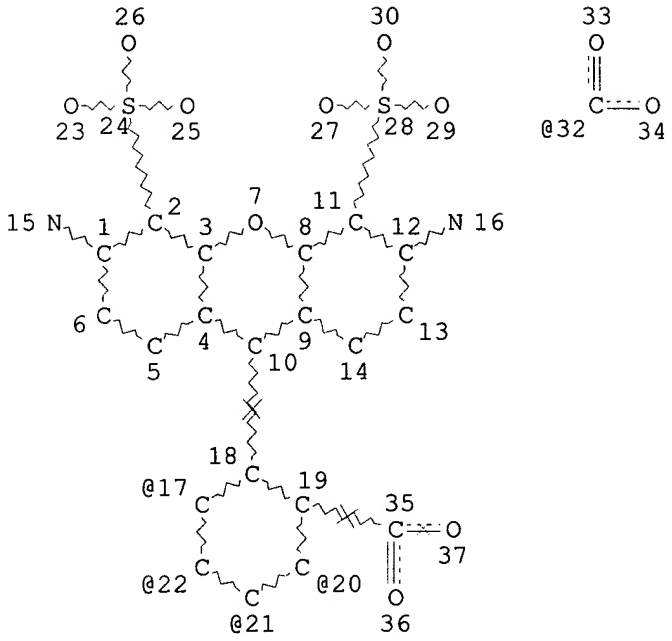
STEREO ATTRIBUTES: NONE
L36 STR




NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RSPEC I
NUMBER OF NODES IS 26

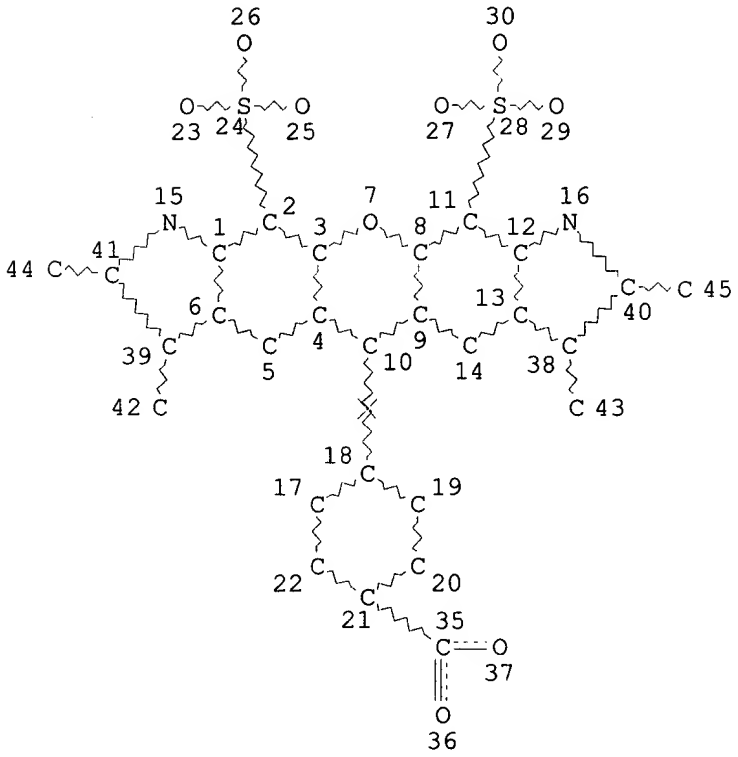
STEREO ATTRIBUTES: NONE
L38 STR



VPA 32-20/21/22/17 U
NODE ATTRIBUTES:
CONNECT IS E1 RC AT 15
CONNECT IS E1 RC AT 16
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 36

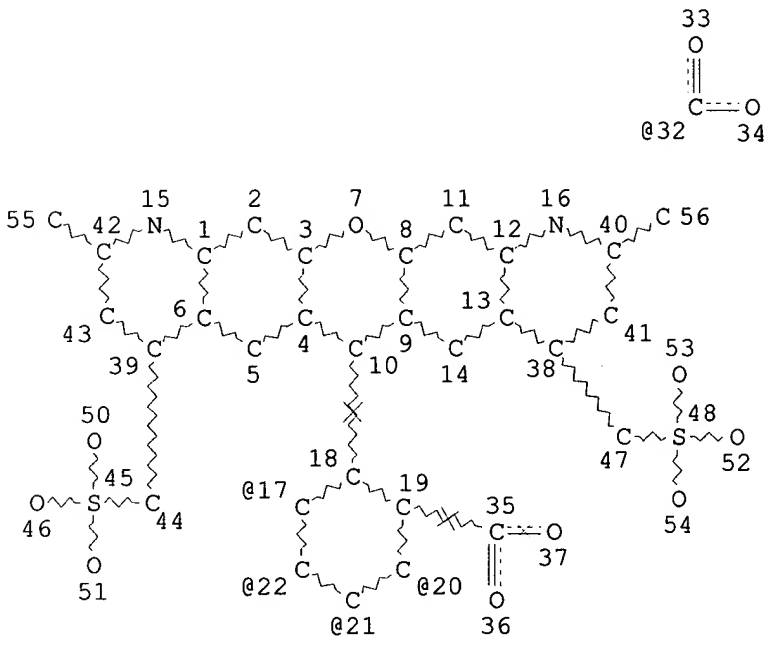
STEREO ATTRIBUTES: NONE
L39 STR



NODE ATTRIBUTES:
CONNECT IS E1 RC AT 15
CONNECT IS E1 RC AT 16
DEFAULT MLEVEL IS ATOM
MLEVEL IS CLASS AT 40 41
DEFAULT ECLEVEL IS LIMITED
ECOUNT IS UNLIMITED AT 40 41

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 41

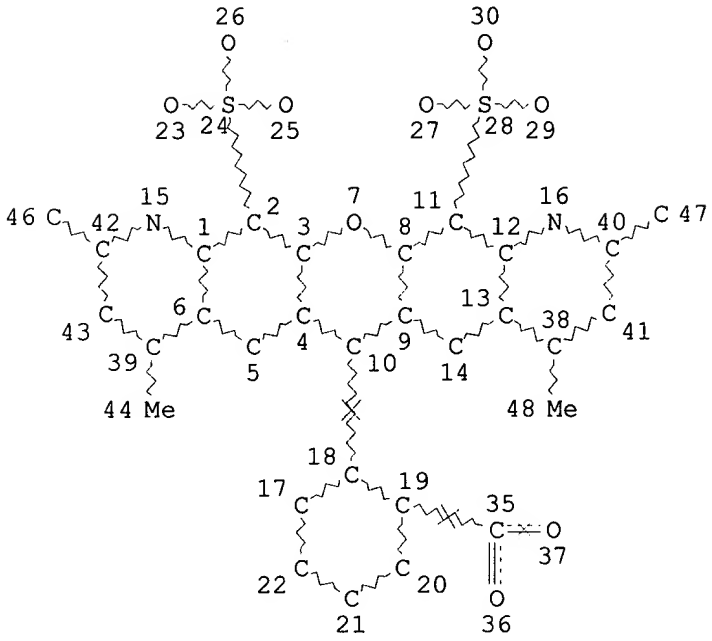
STEREO ATTRIBUTES: NONE
L41 STR



VPA 32-20/21/22/17 U
NODE ATTRIBUTES:
CONNECT IS E1 RC AT 15
CONNECT IS E1 RC AT 16
DEFAULT MLEVEL IS ATOM
MLEVEL IS CLASS AT 40 41 42 43
DEFAULT ECLEVEL IS LIMITED
ECOUNT IS UNLIMITED AT 40 41 42 43

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 46

STEREO ATTRIBUTES: NONE
L42 STR



NODE ATTRIBUTES:
CONNECT IS E1 RC AT 15
CONNECT IS E1 RC AT 16
DEFAULT MLEVEL IS ATOM
MLEVEL IS CLASS AT 40 41 42 43
DEFAULT ECLEVEL IS LIMITED
ECOUNT IS UNLIMITED AT 40 41 42 43

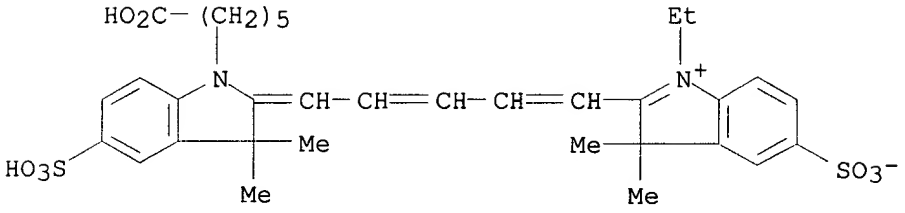
GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 43

STEREO ATTRIBUTES: NONE
L44 29 SEA FILE=REGISTRY SUB=L31 SSS FUL L34 OR L36 OR L38 OR L39 OR L41 OR L42

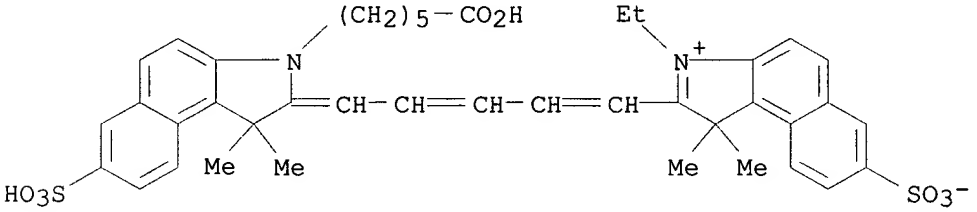
=> d bib abs hitstr

L63 ANSWER 1 OF 18 USPATFULL
AN 2000:113658 USPATFULL
TI Efficient activated cyanine dyes
IN Reddy, M. Parameswara, Brea, CA, United States
Michael, Maged A., Placentia, CA, United States
Farooqui, Firdous, Brea, CA, United States
Hanna, Naeem B., Fullerton, CA, United States
PA Beckman Coulter, Inc., Fullerton, CA, United States (U.S. corporation)
PI US 6110630 20000829
AI US 1998-100150 19980618 (9)
DT Utility
EXNAM Primary Examiner: Riley, Jezia
LREP May, William H.; Kivinski, Margaret A.
CLMN Number of Claims: 33
ECL Exemplary Claim: 1
DRWN 9 Drawing Figure(s); 8 Drawing Page(s)
LN.CNT 1116
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Activating groups based on N-hydroxynaphthalimide, are disclosed herein.
The activating groups can mediate the coupling of labeling moieties, such as biotin or cyanine dyes, to a variety of components, including chain terminators, nucleoside triphosphates, and oligonucleotides, which
are used in nucleotide sequencing. From these activating groups, activated esters of the labeling moieties can be prepared. The activated
esters react with a component, for example a derivatized nucleotide chain terminator, to give a labeled component. In additions, methods of the present invention provide for labeling a nucleoside triphosphate in organic media. The activating groups and methods of the present invention allow the activation and coupling reactions to occur at a much
higher yield, compared with the prior art.

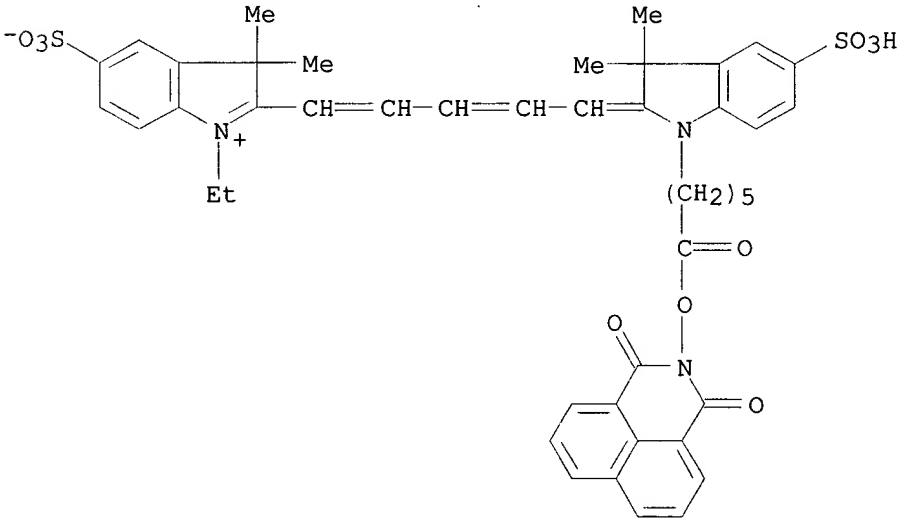
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **146368-11-8 210834-24-5 252919-98-5**
**252919-99-6**
(cyanine dyes activated for conjugation with nucleotides by naphthalimidyl ester groups)
RN 146368-11-8 USPATFULL
CN 3H-Indolium,
2-[5-[1-(5-carboxypentyl)-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1,3-pentadienyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)



RN 210834-24-5 USPATFULL
CN 1H-Benz[e]indolium, 2-[5-[3-(5-carboxypentyl)-1,3-dihydro-1,1-dimethyl-7-sulfo-2H-benz[e]indol-2-ylidene]-1,3-pentadienyl]-3-ethyl-1,1-dimethyl-7-sulfo-, inner salt (9CI) (CA INDEX NAME)

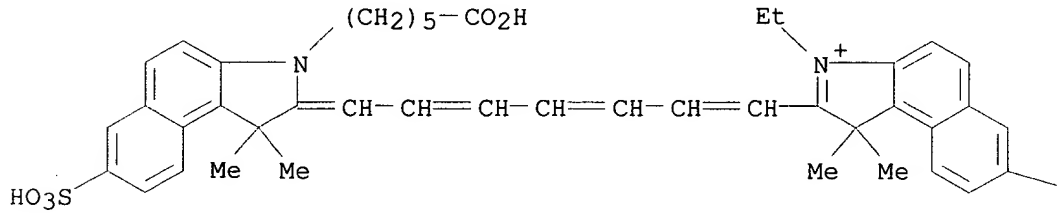


RN 252919-98-5 USPATFULL
CN 3H-Indolium, 2-[5-[1-[6-[(1,3-dioxo-1H-benz[de]isoquinolin-2(3H)-yl)oxy]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1,3-pentadienyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)

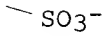


RN 252919-99-6 USPATFULL
CN 1H-Benz[e]indolium, 2-[7-[3-(5-carboxypentyl)-1,3-dihydro-1,1-dimethyl-7-sulfo-2H-benz[e]indol-2-ylidene]-1,3,5-heptatrienyl]-3-ethyl-1,1-dimethyl-7-sulfo-, inner salt (9CI) (CA INDEX NAME)

PAGE 1-A




PAGE 1-B



=> d bib abs hitstr 2

L63 ANSWER 2 OF 18 USPATFULL
AN 2000:109572 USPATFULL
TI Detection of transmembrane potentials by optical methods
IN Tsien, Roger Y., La Jolla, CA, United States
Gonzalez, III, Jesus E., La Jolla, CA, United States
PA The Regents of the University of California, Oakland, CA, United States (U.S. corporation)
PI US 6107066 20000822
WO 9641166 19961219
AI US 1997-765860 19970508 (8)
WO 1996-US9652 19960606
19970508 PCT 371 date
19970508 PCT 102(e) date
DT Utility
EXNAM Primary Examiner: Ceperley, Mary E.
LREP Gray Cary Ware & Freidenrich LLP; Haile, Lisa A.
CLMN Number of Claims: 35
ECL Exemplary Claim: 1
DRWN 26 Drawing Figure(s); 21 Drawing Page(s)
LN.CNT 2478
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Methods and compositions are provided for determining the potential of a
membrane. In one aspect, the method comprises:

(a) introducing a first reagent comprising a hydrophobic fluorescent ion
capable of redistributing from a first face of the membrane to a second face of the membrane in response to changes in the potential of the membrane, as described by the Nernst equation,

(b) introducing a second reagent which labels the first face or the second face of the membrane, which second reagent comprises a chromophore capable of undergoing energy transfer by either (i) donating
excited state energy to the fluorescent ion, or (ii) accepting excited state energy from the fluorescent ion,

(c) exposing the membrane to radiation;

(d) measuring energy transfer between the fluorescent ion and the second
reagent, and

(e) relating the energy transfer to the membrane potential.

Energy transfer is typically measured by fluorescence resonance energy transfer. In some embodiments the first and second reagents are bound together by a suitable linker.

In one aspect the method is used to identify compounds which modulate membrane potentials in biological membranes.

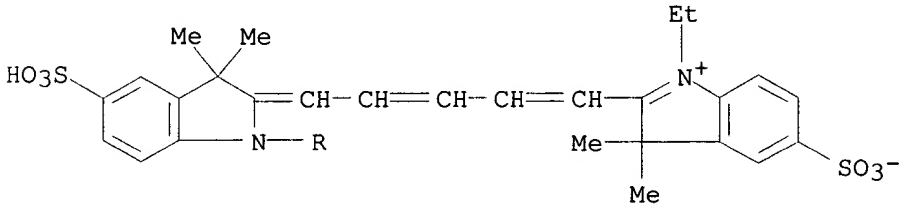
Searched by John Dantzman 703-308-4488

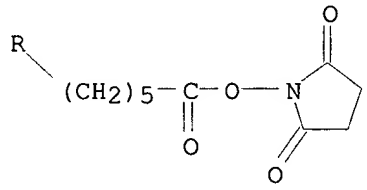
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT **146368-14-1**
(transmembrane potential detn. by fluorescence resonance energy transfer method)

RN 146368-14-1 USPATFULL

CN 3H-Indolium, 2-[5-[1-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1,3-pentadienyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)

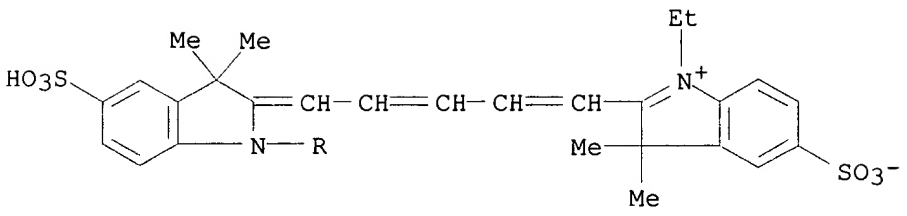




=> d bib abs hitstr 3

L63 ANSWER 3 OF 18 USPATFULL
AN 2000:83827 USPATFULL
TI Intramolecularly-quenched near infrared fluorescent probes
IN Weissleder, Ralph, Charlestown, MA, United States
Tung, Ching-Hsuan, Natick, MA, United States
Mahmood, Umar, Boston, MA, United States
Josephson, Lee, Arlington, MA, United States
Bogdanov, Alexei, Arlington, MA, United States
PA The General Hospital Corporation, Boston, MA, United States (U.S. corporation)
PI US 6083486 20000704
AI US 1998-79447 19980514 (9)
DT Utility
EXNAM Primary Examiner: Clardy, S. Mark; Assistant Examiner: Jones, Dameron
LREP Fish & Richardson P.C.
CLMN Number of Claims: 19
ECL Exemplary Claim: 1
DRWN 10 Drawing Figure(s); 7 Drawing Page(s)
LN.CNT 672
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB An intramolecularly-quenched, near infrared fluorescence probe that emits substantial fluorescence only after interaction with a target tissue (i.e., activation) is disclosed. The probe includes a polymeric backbone and a plurality of near infrared fluorochromes covalently linked to the backbone at fluorescence-quenching interaction-permissive positions separable by enzymatic cleavage at fluorescence activation sites. The probe optionally includes protective chains or fluorochrome spacers, or both. Also disclosed are methods of using the intramolecularly-quenched, near infrared fluorescence probes for in vivo optical imaging.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **146368-14-1**, Cy5
(intramolecularly-quenched near IR fluorescent probes)
RN 146368-14-1 USPATFULL
CN 3H-Indolium, 2-[5-[1-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1,3-pentadienyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)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Me
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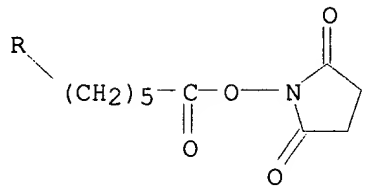
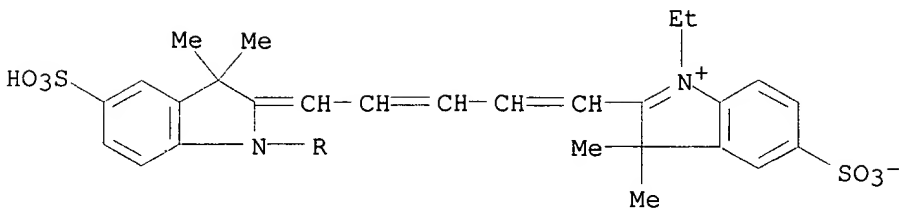
HO3S
CH
CH
CH
CH
CH
N+
N
R
Me
SO3-
Me


R
(CH2)5
C
O
O
N
O
O

=> d bib abs hitstr 4

L63 ANSWER 4 OF 18 USPATFULL
AN 2000:83423 USPATFULL
TI Lapping control sensor for magnetoresistive effect head, lapping control
method using the sensor and manufacturing method of the sensor
IN Fukuroi, Osamu, Tokyo, Japan
Nakagawa, Yoshiro, Tokyo, Japan
PA TDK Corporation, Tokyo, Japan (non-U.S. corporation)
PI US 6083081 20000704
AI US 1998-130446 19980806 (9)
PRAI JP 1997-224436 19970807
DT Utility
EXNAM Primary Examiner: Scherbel, David A.; Assistant Examiner: McDonald, Shantese
LREP Arent Fox Kintner Plotkin & Kahn PLLC
CLMN Number of Claims: 13
ECL Exemplary Claim: 1
DRWN 14 Drawing Figure(s); 6 Drawing Page(s)
LN.CNT 368
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A lapping control sensor for a MR head includes a multi-layered structure of a metallic layer, an insulation layer, a resister layer and
a lead conductor layer, and being provided in parallel with the MR head which has a multi-layered structure of at least a lower shield layer, a shield gap insulation layer, a MR layer and a lead conductor layer is provided. The insulation layer of the lapping control sensor has a thickness larger than that of the shield gap insulation layer of the MR head. The thickness of the insulation layer of the sensor is 0.1 .mu.m or more.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **146368-14-1**
(Cy5; solid phase selection of differentially expressed genes by competitive hybridization with ref. DNA cloned on microparticles)
RN 146368-14-1 USPATFULL
CN 3H-Indolium, 2-[5-[1-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1,3-pentadienyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)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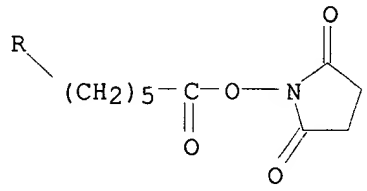
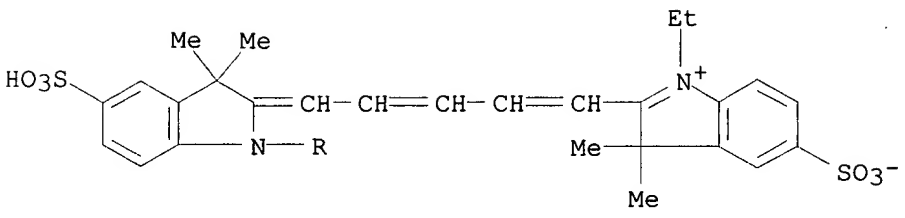
Me
HO3S
CH
CH
CH
CH
CH
Et
N+
N
R
Me
Me
SO3−

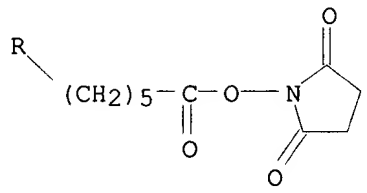

R
(CH2)5
C
O
N
O
O
O

=> d bib abs hitstr 5

L63 ANSWER 5 OF 18 USPATFULL
AN 2000:47052 USPATFULL
TI Method and compound for detecting low levels of microorganisms
IN Rocco, Richard M., Mountain View, CA, United States
PA Biometric Imaging, Inc., Mountain View, CA, United States (U.S. corporation)
PI US 6051395 20000418
AI US 1998-206086 19981204 (9)
PRAI US 1998-97864 19980825 (60)
DT Utility
EXNAM Primary Examiner: Gitomer, Ralph; Assistant Examiner: Moran, Marjorie A.
LREP Schneck, Thomas; Schneck, David M.
CLMN Number of Claims: 13
ECL Exemplary Claim: 1
DRWN 4 Drawing Figure(s); 2 Drawing Page(s)
LN.CNT 431
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A method and compound for detecting low levels of microorganisms in biological samples is disclosed. In the method, an antibiotic is conjugated to a detectable label. This antibiotic/label conjugate is then introduced into a sample containing biological material. The antibiotic binds to target microorganism where the label allows for detection of localized concentrations of the antibiotic. A compound to accomplish this method is also described. This compound is an antibiotic conjugated to a fluorescent dye. This dye has an excitation and emission wavelength that are not interfered by substances typically found in biological samples.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **146368-14-1DP**, Cy5, conjugates with polymyxin B
(Cy5; method and labeled antibiotic compd. for detecting low levels of microorganisms)
RN 146368-14-1 USPATFULL
CN 3H-Indolium, 2-[5-[1-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1,3-pentadienyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)

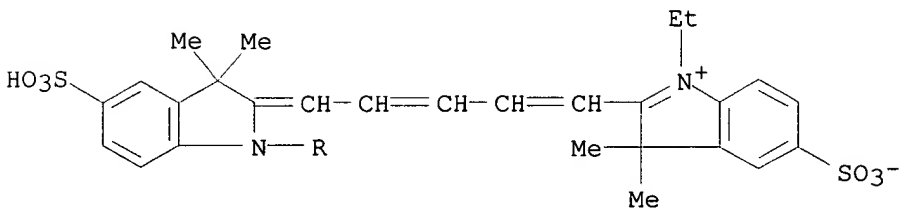


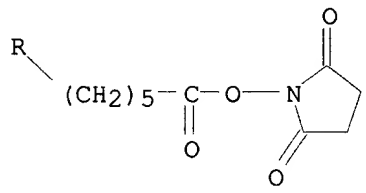


=> d bib abs hitstr 6

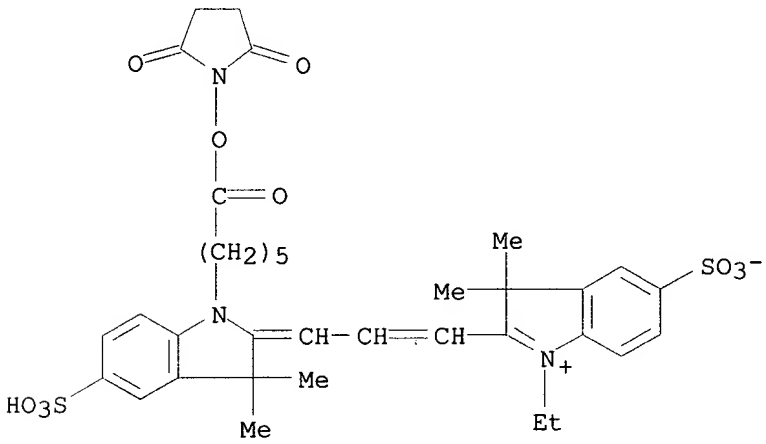
L63 ANSWER 6 OF 18 USPATFULL
AN 2000:37593 USPATFULL
TI Method of sequencing nucleic acids by shift registering
IN McCormick, Randy M., Santa Clara, CA, United States
Briggs, Jonathan, Los Altos Hills, CA, United States
PA Aclara Biosciences, Mountain View, CA, United States (U.S. corporation)
PI US 6043036 20000328
AI US 1997-977931 19971124 (8)
RLI Continuation of Ser. No. US 1996-636414, filed on 23 Apr 1996, now abandoned
DT Utility
EXNAM Primary Examiner: Horlick, Kenneth R.
LREP McDonnell Boehnen Hulbert & Berghoff
CLMN Number of Claims: 28
ECL Exemplary Claim: 1
DRWN 6 Drawing Figure(s); 14 Drawing Page(s)
LN.CNT 1570
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention describes a method of sequencing nucleic acids in which mixtures of oligonucleotide fragments are derived from sequencing reactions using **combinations** of the 2',3'-dideoxynucleoside 5'-triphosphate or 3' deoxynucleoside 5'-triphosphate terminators and appropriate concentrations of four dNTPs (2'-deoxynucleoside 5' triphosphates, e.g., dATP, dCTP, dGTP, dTTP, dITP, 7-deaza-GTP). These fragments are generated by enzymatic extension of a primer hybridized to
the single-stranded template DNA to be sequenced. In contrast to common slab gel sequencing methods, the method of the instant invention does not require precise alignment of the four separation sets of the terminated fragments to permit deduction of the DNA sequence. In addition, the method possesses inherent redundancy in the separations, which facilitates sequence assignment by resolving sequence uncertainties or anomalies.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **146368-14-1D**, FluoroLink Mono Reactive Dye Cy5, conjugate with sequencing primers **146368-16-3D**, FluoroLink Mono Reactive Dye Cy3, conjugate with sequencing primers
(method of sequencing nucleic acids by applying a computer alignment algorithm to electrophoretic sepn. patterns of dideoxy-terminated fragment mixts.)
RN 146368-14-1 USPATFULL
CN 3H-Indolium, 2-[5-[1-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1,3-pentadienyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)





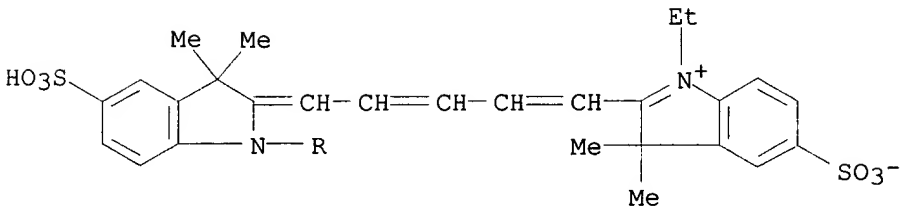
RN 146368-16-3 USPATFULL
CN 3H-Indolium, 2-[3-[1-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1-propenyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)

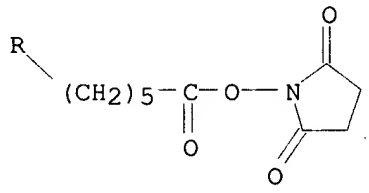


=> d bib abs hitstr 7

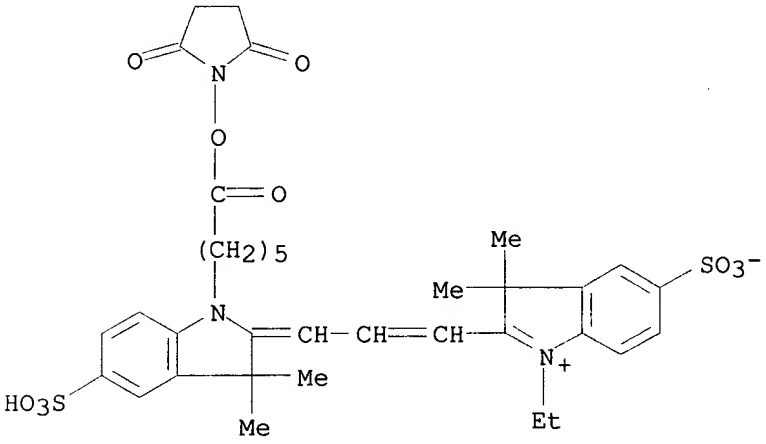
L63 ANSWER 7 OF 18 USPATFULL
AN 1999:170387 USPATFULL
TI Multiparametric fluorescence in situ hybridization
IN Ward, David C., Madison, CT, United States
Speicher, Michael, Riemerling, Germany, Federal Republic of
Ballard, Stephen Gwyn, Hamden, CT, United States
Wilson, John T., St. Simon Is., GA, United States
PA Yale University, New Haven, CT, United States (U.S. corporation)
PI US 6007994 19991228
AI US 1998-88845 19980602 (9)
RLI Continuation-in-part of Ser. No. US 1998-88087, filed on 1 Jun 1998, now
abandoned which is a continuation-in-part of Ser. No. US 1996-640657, filed on 1 May 1996, now patented, Pat. No. US 5759781 which is a continuation-in-part of Ser. No. US 1995-580717, filed on 29 Dec 1995, now abandoned which is a continuation-in-part of Ser. No. US 1995-577622, filed on 22 Dec 1995, now abandoned
DT Utility
EXNAM Primary Examiner: Brusca, John S.
LREP Howrey & Simon; Auerbach, Jeffrey I.
CLMN Number of Claims: 58
ECL Exemplary Claim: 25
DRWN 27 Drawing Figure(s); 11 Drawing Page(s)
LN.CNT 3572
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The invention relates to a set of **combinatorially** labeled oligonucleotide probes each member thereof: (i) having a predetermined label distinguishable from the label of any other member of said set, and (ii) being capable of specifically hybridizing with a predetermined chromosome or nucleic acid molecule, and to the use of such molecules, alone or in concert with nucleic acid amplification methods.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **146368-14-1**, FluoroLink Mono Reactive Dye Cy5 **146368-16-3**
, FluoroLink Mono Reactive Dye Cy3
(as fluorescent label for probes; multiparametric fluorescence in situ hybridization for identification of human chromosomes and microbial nucleic acids)
RN 146368-14-1 USPATFULL
CN 3H-Indolium, 2-[5-[1-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1,3-pentadienyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)





RN 146368-16-3 USPATFULL
CN 3H-Indolium, 2-[3-[1-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1-propenyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)

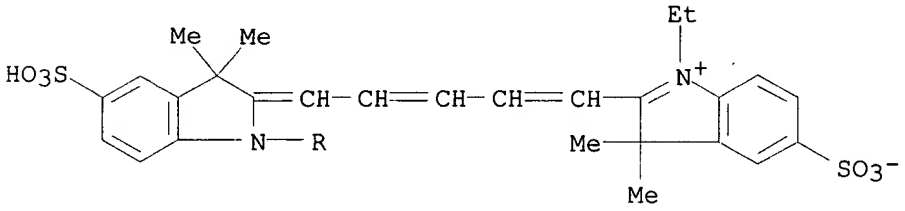


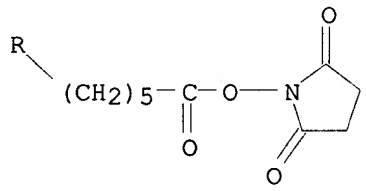
=> d bib abs hitstr 8

L63 ANSWER 8 OF 18 USPATFULL
AN 1999:155473 USPATFULL
TI Simultaneous analyses of white blood cell subsets using multi-color, multi-intensity fluorescent markers in flow cytometry
IN Siiman, Olavi, Davie, FL, United States
Burshteyn, Alexander, Hialeah, FL, United States
Wilkinson, Julie, Weston, FL, United States
Mylvaganam, Ravindra, Hollywood, FL, United States
PA Coulter International Corp., Miami, FL, United States (U.S. corporation)
PI US 5994089 19991130
AI US 1997-976031 19971121 (8)
RLI Continuation-in-part of Ser. No. US 1997-857941, filed on 16 May 1997, now patented, Pat. No. US 5891741
DT Utility
EXNAM Primary Examiner: Chin, Christopher L.
LREP Bak, Mary E.; Kurz, Warren W.
CLMN Number of Claims: 5
ECL Exemplary Claim: 1
DRWN 34 Drawing Figure(s); 16 Drawing Page(s)
LN.CNT 1400
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A method for a single-measurement quantification of multiple populations of white blood cells (WBC) is based upon the labeling of different pairs of cell populations, each pair containing mutually exclusive cell receptors which are expressed at substantially similar receptor densities with labeled ligands for each receptor. One cell population is labeled with a ligand capable of binding to a first cell surface receptor which ligand is directly conjugated to a fluorescent phycobiliprotein or tandem dye; and a second cell population is labeled with a ligand capable of binding to a second cell surface receptor, which ligand is cross-linked by an aminodextran to a fluorescent phycobiliprotein or tandem dye. The phycobiliproteins upon laser excitation produce a different detectable fluorescence intensity for each cell population. Use of such pairs of conjugates enable two populations of cells with similar receptor densities to be distinguished with the use of a single color marker. Further use of additional ligands to other cell surface receptors and additional phycobiliprotein or tandem dye, or other markers in the same manner, enables the simultaneous quantification of up to 45 different cell populations with one laser line and four fluorescent colors.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **146368-14-1D**, CY5, derivs., conjugates with phycoerythrins and aminodextran-ligand conjugate
(simultaneous analyses of white blood cell subsets using multi-color, multi-intensity fluorescent markers in flow cytometry)
RN 146368-14-1 USPATFULL

CN 3H-Indolium, 2-[5-[1-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1,3-pentadienyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)

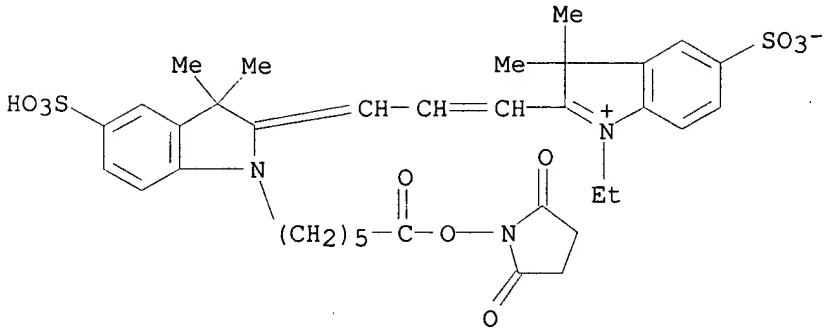


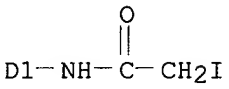



=> d bib abs hitstr 9

L63 ANSWER 9 OF 18 USPATFULL
AN 1999:110226 USPATFULL
TI Enzyme-based fluorescence biosensor for chemical analysis
IN Thompson, Richard B., 7106 Bristol Rd., Baltimore, MD, United States 21212
Patchan, Marcia W., 9651 Hingston Downs, Columbia, MD, United States 21046
Ge, Zhengfang, 3D Beacon Village, Burlington, MA, United States 01803
PI US 5952236 19990914
AI US 1996-736904 19961025 (8)
PRAI US 1995-5879 19951026 (60)
DT Utility
EXNAM Primary Examiner: Achutamurthy, Ponnathapura; Assistant Examiner: Wiessendorf, T. D.
CLMN Number of Claims: 7
ECL Exemplary Claim: 1
DRWN 16 Drawing Figure(s); 16 Drawing Page(s)
LN.CNT 865
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB This invention generally relates to the detection, determination, and quantitation of certain ions and small molecules involving the quenching
of a fluorescent label attached to a macromolecule, often due to fluorescence energy transfer to a colored inhibitor or certain metal ions bound to the macromolecule.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **241483-43-2**
(photoluminescent label; metal ions detn. water by biosensor based on fluorescence quenching of fluorescent label attached to macromol. due to fluorescence energy transfer to colored inhibitor or metal ions bound to macromol.)
RN 241483-43-2 USPATFULL
CN 3H-Indolium, 2-[3-[1-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1-propenyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt, mono[(iodoacetyl)amino] deriv. (9CI) (CA
INDEX NAME)

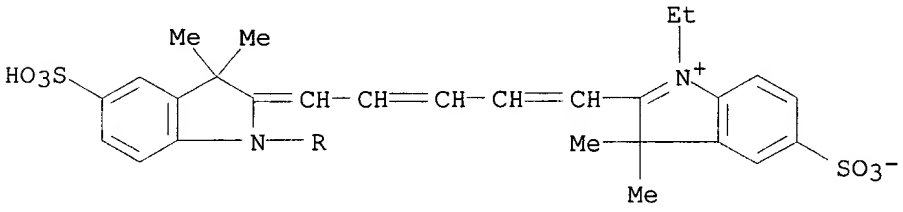


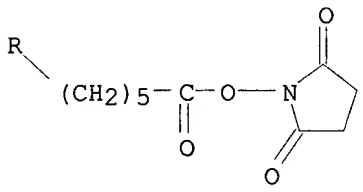


=> d bib abs hitstr 10

L63 ANSWER 10 OF 18 USPATFULL
AN 1999:102680 USPATFULL
TI Method for distinguishing viable, early apoptotic, late apoptotic, and necrotic cells
IN Bolton, Wade E., Plantation, FL, United States
Koester, Steven K., Pembroke Pines, FL, United States
PA Coulter International Corp., Miami, FL, United States (U.S. corporation)
PI US 5945291 19990831
AI US 1997-966937 19971110 (8)
DT Utility
EXNAM Primary Examiner: Hutzell, Paula K.; Assistant Examiner: Bansal, Geetha P.
LREP Kodroff, Cathy A.
CLMN Number of Claims: 19
ECL Exemplary Claim: 1,14,19
DRWN 4 Drawing Figure(s); 1 Drawing Page(s)
LN.CNT 516
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention provides a method for distinguishing between viable, early apoptotic, late apoptotic and necrotic cells utilizing multi-color immunofluorescence.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **146368-14-1**, Cy5
(Cy 5; distinguishing of viable, early apoptotic and necrotic cells by immunofluorescence staining)
RN 146368-14-1 USPATFULL
CN 3H-Indolium, 2-[5-[1-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1,3-pentadienyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)



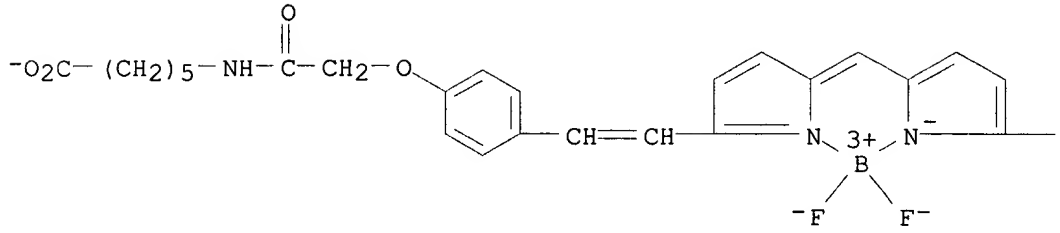

Searched by John Dantzman 703-308-4488

=> d bib abs hitstr 11

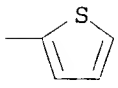
L63 ANSWER 11 OF 18 USPATFULL
AN 1999:97615 USPATFULL
TI Liquid immersion development machine having a multiple zone image development and conditioning apparatus
IN Domoto, Gerald A., Briarcliff Manor, NY, United States
Hauser, Oscar G., Rochester, NY, United States
Wang, F. James, Pittsford, NY, United States
PA Xerox Corporation, Stamford, CT, United States (U.S. corporation)
PI US 5940665 19990817
AI US 1998-92512 19980605 (9)
DT Utility
EXNAM Primary Examiner: Grimley, Arthur T.; Assistant Examiner: Chen, Sophia S.
LREP Nguti, Tallam I.
CLMN Number of Claims: 11
ECL Exemplary Claim: 1
DRWN 4 Drawing Figure(s); 4 Drawing Page(s)
LN.CNT 690
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A single image development and conditioning apparatus is disclosed for removing excess liquid carrier from a developed image developed in a liquid immersion development machine using liquid developer material having a first toner concentration. The single image development and conditioning apparatus includes a first zone located downstream of a coating device relative to a direction of movement of a surface bearing the developed image, a second zone located downstream of the first zone, and a third zone located downstream of the second zone. The first zone includes a first biased electrode for partially removing charged solid toner particles from background areas of the developed image. The second zone includes a second biased electrode for completing removal of charged solid toner particles from the background areas, and the third zone includes a third biased electrode. The first, second and third zones are arranged and biased so as to enable (i) removal, from the background areas, of liquid developer material consisting of liquid carrier and charged solid toner particles, and (ii) removal, from the image areas only, of excess carrier liquid, thereby creating a resulting toner image having a toner concentration significantly higher than the first toner concentration of the liquid developer material.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **209340-49-8**, BODIPY 630/650
(BODIPY 630/650, fluorescent indicator; methods for detg. cross-hybridization based on dissocn. kinetics)
RN 209340-49-8 USPATFULL
CN Borate(1-), difluoro[6-[[[4-[2-[2-[[5-(2-thienyl)-1H-pyrrol-2-yl-.kappa.N]methylene]-2H-pyrrol-5-yl-.kappa.N]ethenyl]phenoxy]acetyl]amino]hexanoato(2-)]-, hydrogen, (T-4)- (9CI) (CA INDEX NAME)

PAGE 1-A



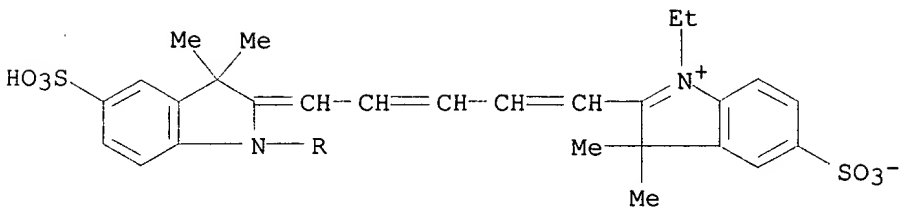
PAGE 1-B

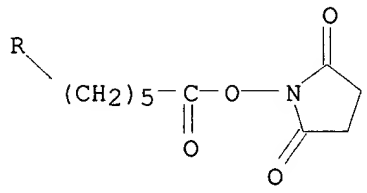


=> d bib abs hitstr 12

L63 ANSWER 12 OF 18 USPATFULL
AN 1999:27410 USPATFULL
TI **High-throughput** assay
IN Burbaum, Jonathan J., Cranbury, NJ, United States
Chung, Thomas D.Y., Wilmington, DE, United States
Kirk, Gregory L., Skillman, NJ, United States
Inglese, James, Dayton, NJ, United States
Chelsky, Daniel, Moylan, PA, United States
PA Pharmacopeia, Inc., Princeton, NJ, United States (U.S. corporation)
PI US 5876946 19990302
AI US 1997-868280 19970603 (8)
DT Utility
EXNAM Primary Examiner: Stucker, Jeffrey
LREP Darby & Darby
CLMN Number of Claims: 38
ECL Exemplary Claim: 1
DRWN 8 Drawing Figure(s); 6 Drawing Page(s)
LN.CNT 1049
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A homogeneous **high throughput** assay is described which screens compounds for enzyme inhibition, or receptor or other target binding. Inhibition (or binding) by the **library** compounds causes a change in the amount of an optically detectable label that is bound to suspendable cells or solid supports. The amounts of label bound to individual cells or solid supports are microscopically determined, and compared with the amount of label that is not bound to individual cells or solid supports. The degree of inhibition or binding is determined using this data. Confocal microscopy, and subsequent data analysis, allow the assay to be carried out without any separation step, and provide for **high throughput** screening of very small assay volumes using very small amounts of test compound.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **146368-14-1D**, Cy5, conjugates with neurokinin A and IL-8
(Cy5; high-throughput assay for enzyme inhibitors and receptor- and target-binding ligands)
RN 146368-14-1 USPATFULL
CN 3H-Indolium, 2-[5-[1-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1,3-pentadienyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)



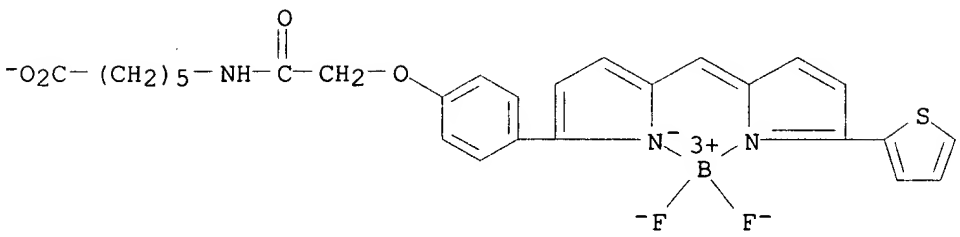


=> d bib abs hitstr 13

L63 ANSWER 13 OF 18 USPATFULL
AN 1999:7274 USPATFULL
TI Alternative dye-labeled primers for automated DNA sequencing
IN Metzker, Michael L., Houston, TX, United States
Gibbs, Richard A., Houston, TX, United States
PA Baylor College of Medicine, Houston, TX, United States (U.S. corporation)
PI US 5861287 19990119
AI US 1995-540228 19951006 (8)
RLI Continuation-in-part of Ser. No. US 1995-494216, filed on 23 Jun 1995, now patented, Pat. No. US 5614386
DT Utility
EXNAM Primary Examiner: Jones, W. Gary; Assistant Examiner: Rees, Dianne
LREP Fulbright & Jaworski LLP
CLMN Number of Claims: 19
ECL Exemplary Claim: 1
DRWN 14 Drawing Figure(s); 12 Drawing Page(s)
LN.CNT 1256
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Methods for the use of a class of dyes for improved DNA sequencing are provided. A new class of dyes, BODIPY.RTM. fluorophores, has been described recently. The parent heterocyclic molecule of the BODIPY.RTM. fluorophores is a dipyrromethene boron difluoride compound which is modified to create a broad class of spectrally-discriminating fluorophores. The present invention provides methods for the use of BODIPY.RTM. fluorophore-labeled DNA for dye-primer sequencing in which the BODIPY.RTM.s are attached to the 5' end of sequencing primers. BODIPY.RTM. fluorophores have improved spectral characteristics compared to conventional fluorescein and rhodamine dyes. BODIPY.RTM. fluorophores have narrower band width, insensitivity to solvent or pH, and improved photostability, thus, BODIPY.RTM. fluorophores lead to improved DNA sequencing and/or detection in any method where electrophoresis and detection of DNA is required. Additionally, the spectral properties of the BODIPY.RTM. fluorophores are sufficiently similar in wavelength and intensity to be used with conventional equipment known in the art.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **186961-29-5**, Bodipy 589/616
(as label; BODIPY fluorophore labels and alternative dye-labeled primers for automated DNA sequencing)
RN 186961-29-5 USPATFULL
CN Borate(1-), difluoro[6-[[[4-[5-[[5-(2-thienyl)-2H-pyrrol-2-ylidene-

.kappa.N]methyl]-1H-pyrrol-2-yl-.kappa.N]phenoxy]acetyl]amino]hexanoato(2-)]-, hydrogen, (T-4)- (9CI) (CA INDEX NAME)

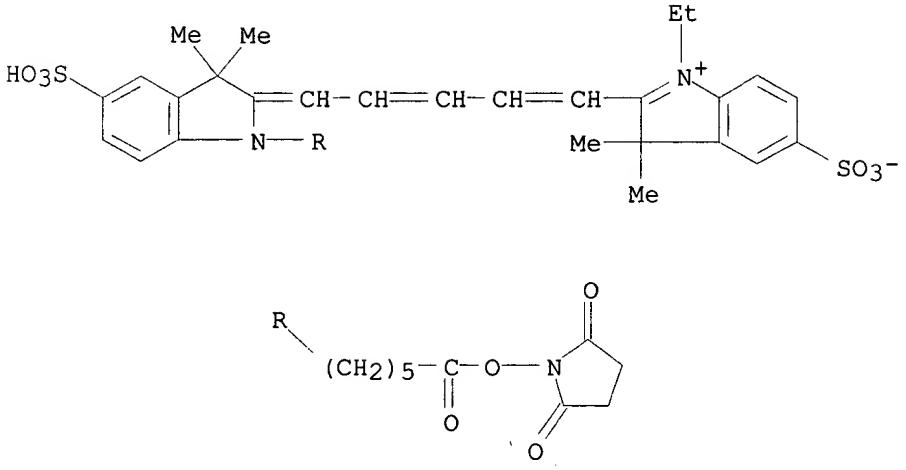


● $H^+$

=> d bib abs hitstr 14

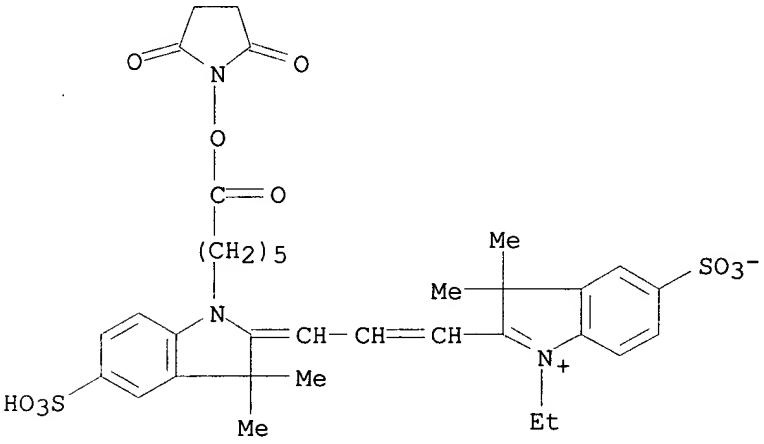
L63 ANSWER 14 OF 18 USPATFULL
AN 1998:162256 USPATFULL
TI Use of nucleic acid ligands in flow cytometry
IN Davis, Ken, Los Altos, CA, United States
Jayasena, Sumedha, Boulder, CO, United States
Gold, Larry, Boulder, CO, United States
PA NeXstar Pharmaceuticals, Inc., Boulder, CO, United States (U.S. corporation)
PI US 5853984 19981229
AI US 1995-479729 19950607 (8)
RLI Continuation-in-part of Ser. No. US 1992-964624, filed on 21 Oct 1992, now patented, Pat. No. US 5496938 Ser. No. Ser. No. US 1994-199507, filed on 22 Feb 1994, now patented, Pat. No. US 5472841 Ser. No. Ser. No. US 1994-234997, filed on 28 Apr 1994, now patented, Pat. No. US 5683867 And Ser. No. US 1991-714131, filed on 10 Jun 1991, now patented,
Pat. No. US 5475096 which is a continuation-in-part of Ser. No. US 1990-536428, filed on 11 Jun 1990, now abandoned
DT Utility
EXNAM Primary Examiner: Zitomer, Stephanie W.; Assistant Examiner: Tung, Joyce
LREP Swanson & Bratschun LLC
CLMN Number of Claims: 14
ECL Exemplary Claim: 1
DRWN 6 Drawing Figure(s); 4 Drawing Page(s)
LN.CNT 1072
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB This invention discloses the use of high-affinity oligonucleotide ligands in flow cytometry diagnostic applications. Specifically, DNA ligands having one or more fluorophore molecules attached are disclosed which are useful in flow cytometry.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **146368-14-1 146368-16-3**
(use of nucleic acid ligands in flow cytometry)
RN 146368-14-1 USPATFULL
CN 3H-Indolium, 2-[5-[1-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1,3-pentadienyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)





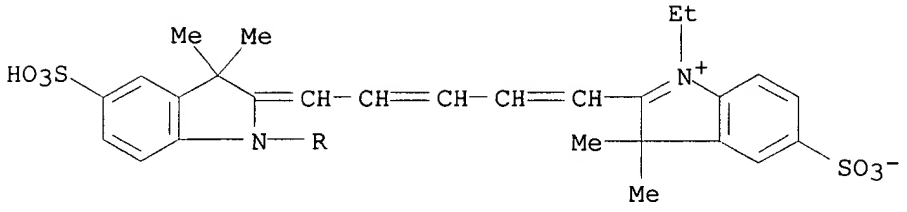
RN 146368-16-3 USPATFULL
CN 3H-Indolium, 2-[3-[1-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1-propenyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)

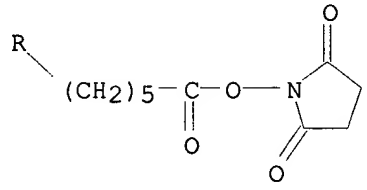


=> d bib abs hitstr 15

L63 ANSWER 15 OF 18 USPATFULL
AN 1998:104569 USPATFULL
TI Energy transfer dyes with enchanced fluorescence
IN Lee, Linda G., Palo Alto, CA, United States
Spurgeon, Sandra L., San Mateo, CA, United States
Rosenblum, Barnett, San Jose, CA, United States
PA The Perkin Elmer Corporation, Foster City, CA, United States (U.S. corporation)
PI US 5800996 19980901
AI US 1996-726462 19961004 (8)
RLI Continuation-in-part of Ser. No. US 1996-642330, filed on 3 May 1996
And
Ser. No. US 1996-672196, filed on 27 Jun 1996
DT Utility
EXNAM Primary Examiner: Houtteman, Scott W.
LREP Wilson Sonsini Goodrich & Rosati
CLMN Number of Claims: 79
ECL Exemplary Claim: 1,76
DRWN 28 Drawing Figure(s); 16 Drawing Page(s)
LN.CNT 2556
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Novel linkers for linking a donor dye to an acceptor dye in an energy transfer fluorescent dye are provided. These linkers faciliate the efficient transfer of energy between a donor and acceptor dye in an energy transfer dye. One of these linkers for linking a donor dye to an acceptor dye in an energy transfer fluorescent dye has the general structure R.sub.21 Z.sub.1 C(O)R.sub.22 R.sub.28 where R.sub.21 is a C.sub.1-5 alkyl attached to the donor dye, C(O) is a carbonyl group, Z.sub.1 is either NH, sulfur or oxygen, R.sub.22 is a substituent which includes an alkene, diene, alkyne, a five and six membered ring having at least one unsaturated bond or a fused ring structure which is attached to the carbonyl carbon, and R.sub.28 includes a functional group which attaches the linker to the acceptor dye.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **146368-14-1P**
(energy transfer dyes with enhanced fluorescence)
RN 146368-14-1 USPATFULL
CN 3H-Indolium, 2-[5-[1-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1,3-pentadienyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)



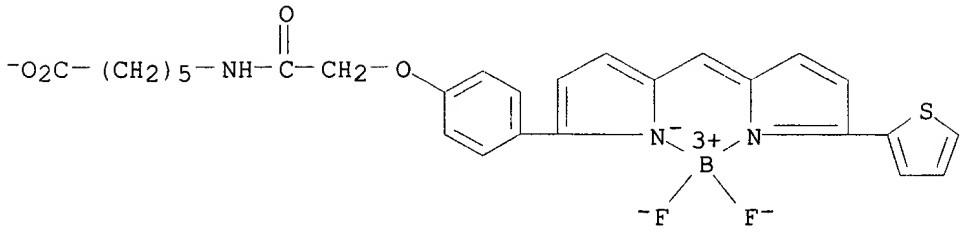


=> d bib abs hitstr 16

L63 ANSWER 16 OF 18 USPATFULL
AN 1998:27911 USPATFULL
TI Alternative dye-labeled ribonucleotides, deoxyribonucleotides, and dideoxyribonucleotides for automated DNA analysis
IN Metzker, Michael L., Houston, TX, United States
Gibbs, Richard A., Houston, TX, United States
PA Baylor College Of Medicine, Houston, TX, United States (U.S. corporation)
PI US 5728529 19980317
AI US 1995-553936 19951106 (8)
RLI Continuation-in-part of Ser. No. US 1995-494216, filed on 23 Jun 1995, now patented, Pat. No. US 5614386
DT Utility
EXNAM Primary Examiner: Jones, W. Gary; Assistant Examiner: Rees, Dianne
LREP Fulbright & Jaworski L.L.P.
CLMN Number of Claims: 17
ECL Exemplary Claim: 1
DRWN 2 Drawing Figure(s); 2 Drawing Page(s)
LN.CNT 940
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Methods for the use of a class of dyes for improved DNA sequencing by the chain termination method of DNA sequencing, and internal labelling of polynucleotides by enzymatic incorporation of fluorescently-labeled ribonucleotides or deoxyribonucleotides are provided. A new class of dyes, BODIPY.RTM. fluorophores, has been described recently. The parent heterocyclic molecule of the BODIPY.RTM. fluorophores is a dipyrrometheneboron difluoride compound which is modified to create a broad class of spectrally-discriminating fluorophores. BODIPY.RTM. fluorophores have improved spectral characteristics compared to conventional fluorescein and rhodamine dyes. BODIPY.RTM. fluorophores have narrower band width, insensitivity to solvent or pH, and improved photostability, thus, BODIPY.RTM. fluorophores lead to improved DNA sequencing and/or detection in any method where electrophoresis and detection of DNA is required. Additionally, the spectral properties of the BODIPY.RTM. fluorophores are sufficiently similar in wavelength and intensity to be used with conventional equipment known in the art.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **186961-29-5DP**, oligonucleotide primers labeled with (BODIPY 589/616; alternative dye-labeled primers, ribonucleotides, deoxyribonucleotides, and dideoxyribonucleotides for automated DNA anal. and homogeneous amplification/detection assays)
RN 186961-29-5 USPATFULL
CN Borate(1-), difluoro[6-[[[4-[5-[[5-(2-thienyl)-2H-pyrrol-2-ylidene-

.kappa.N]methyl]-1H-pyrrol-2-yl-.kappa.N]phenoxy]acetyl]amino]hexanoato(2-)]-, hydrogen, (T-4)- (9CI) (CA INDEX NAME)

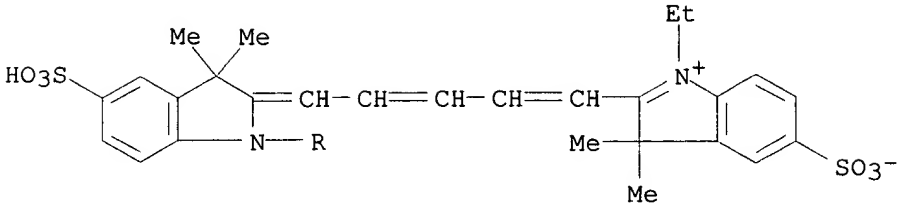


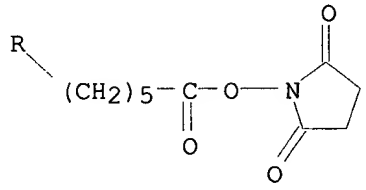
● $H^+$

=> d bib abs hitstr 17

L63 ANSWER 17 OF 18 USPATFULL
AN 97:76020 USPATFULL
TI Voltage sensing by fluorescence resonance energy transfer
IN Tsien, Roger Y., La Jolla, CA, United States
Gonzalez, III, Jesus E., La Jolla, CA, United States
PA The Regents of the University of California, Oakland, CA, United States (U.S. corporation)
PI US 5661035 19970826
AI US 1995-481977 19950607 (8)
DT Utility
EXNAM Primary Examiner: Snay, Jeffrey
LREP Townsend & Townsend & Crew LLP
CLMN Number of Claims: 6
ECL Exemplary Claim: 1
DRWN 10 Drawing Figure(s); 9 Drawing Page(s)
LN.CNT 1186
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Compositions and methods for use in generating fast ratiometric voltage-sensitive fluorescence changes in single or multiple cells systems. A first reagent is a membrane-bound hydrophobic fluorescent anion which rapidly redistributes from one face of the plasma membrane to the other in response to the transmembrane potential, as described by the Nernst equation. A voltage-sensitive fluorescent readout is created by labeling the intracellular or extracellular surface of the cell with a second reagent comprising a fluorophore which can undergo energy transfer with the first reagent or a quencher for the first reagent. Quenching or FRET between the two reagents is disrupted when the membrane potential is depolarized, because the anionic first reagent is pulled to the intracellular surface of the plasma membrane far from the asymmetrically bound second reagent. In preferred embodiments of the invention, the first and second reagents are bound together by a suitable linker group.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **146368-14-1**
(transmembrane potential detn. by fluorescence resonance energy transfer method)
RN 146368-14-1 USPATFULL
CN 3H-Indolium, 2-[5-[1-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1,3-pentadienyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)



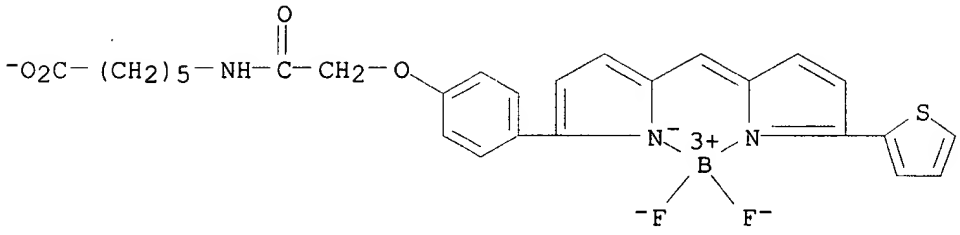


=> d bib abs hitstr 18

L63 ANSWER 18 OF 18 USPATFULL
AN 97:24903 USPATFULL
TI Alternative dye-labeled primers for automated DNA sequencing
IN Metzker, Michael L., Houston, TX, United States
Gibbs, Richard A., Houston, TX, United States
PA Baylor College of Medicine, Houston, TX, United States (U.S. corporation)
PI US 5614386 19970325
AI US 1995-494216 19950623 (8)
DT Utility
EXNAM Primary Examiner: Zitomer, Stephanie W.; Assistant Examiner: Rees, Dianne
LREP Fulbright & Jaworski L.L.P.
CLMN Number of Claims: 3
ECL Exemplary Claim: 1
DRWN 11 Drawing Figure(s); 11 Drawing Page(s)
LN.CNT 990
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Methods for the use of a class of dyes for improved DNA sequencing are provided. A new class of dyes, BODIPY.RTM. fluorophore, has been described recently. The parent heterocyclic molecule of the BODIPY.RTM. fluorophore is a dipyrrometheneboron difluoride compound which is modified to create a broad class of spectrally-discriminating fluorophores. The present invention provides methods for the use of BODIPY.RTM. fluorophore-labeled DNA. BODIPY.RTM. fluorophore have improved spectral characteristics compared to conventional fluorescein and rhodamine dyes. BODIPY.RTM. fluorophore have narrower band width, insensitivity to solvent or pH, and improved photostability, thus, BODIPY.RTM. fluorophores lead to improved DNA sequencing and/or detection in any method where electrophoresis and detection of DNA is required. Additionally, the spectral properties of the BODIPY.RTM. fluorophores are sufficiently similar in wavelength and intensity to be used with conventional equipment known in the art.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
IT **186961-29-5DP**, oligonucleotide primers labeled with (BODIPY 589/616; alternative dye-labeled primers, ribonucleotides, deoxyribonucleotides, and dideoxyribonucleotides for automated DNA anal. and homogeneous amplification/detection assays)
RN 186961-29-5 USPATFULL
CN Borate(1-), difluoro[6-[[[4-[5-[[5-(2-thienyl)-2H-pyrrol-2-ylidene-

.kappa.N]methyl]-1H-pyrrol-2-yl-.kappa.N]phenoxy]acetyl]amino]hexanoato(2-)]-, hydrogen, (T-4)- (9CI) (CA INDEX NAME)



● $H^+$

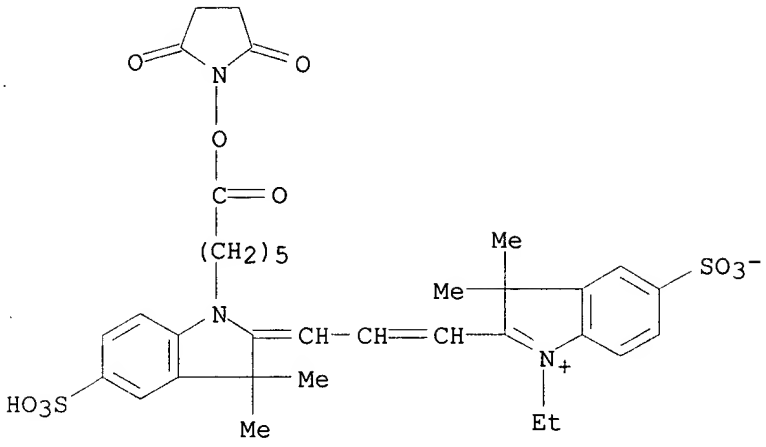
=> d bib abs hitstr

L55 ANSWER 1 OF 37 HCAPLUS COPYRIGHT 2000 ACS
AN 2000:608989 HCAPLUS
DN 133:203805
TI Single nucleotide polymorphisms detection by sandwich nucleic acid hybridization
IN Arnold, Lyle; Theriault, Thomas; Bedilion, Tod
PA Incyte Pharmaceuticals, Inc., USA
SO PCT Int. Appl., 30 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| PI WO 2000050869 | A2 | 20000831 | WO 2000-US4876 | 20000224 |

W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRAI US 1999-259898 19990226
AB The invention provides methods, compns. and systems for detecting multiple single nucleotide polymorphisms (SNPs) in a population of target polynucleotides in parallel in a sandwich assay employing SNP probes, capture polynucleotides and, optionally, auxillary polynucleotides. The relative affinities of the SNP probes for the corresponding SNP regions can be increased with reagents which normalize the melting temps. of the probes and/or by positionally facilitating interactions between the SNP probe, the SNP region, the capture polynucleotide and/or the auxiliary polynucleotides, such as through a minor groove binder. The probes may comprise a degenerate set of all possible same-sized polynucleotides and the capture polynucleotides are generally immobilized and arrayed at corresponding discrete elements in high d.
IT **146368-16-3**, Cy3
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(conjugation to oligonucleotide, signal of hybridization; single nucleotide polymorphisms detection by sandwich nucleic acid hybridization)
RN 146368-16-3 HCAPLUS
CN 3H-Indolium, 2-[3-[1-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1-propenyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)



=> d bib abs hitstr 2

L55 ANSWER 2 OF 37 HCAPLUS COPYRIGHT 2000 ACS
AN 2000:441969 HCAPLUS
DN 133:86486
TI **High throughput** assay system using Multi **Array** Plate Screen, nuclease protection, oligonucleotide anchors, bifunctional linkers, and mass spectrometry
IN Kris, Richard M.; Felder, Stephen
PA USA
SO PCT Int. Appl., 111 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| PI WO 2000037684 | A1 | 20000629 | WO 1999-US30515 | 19991222 |

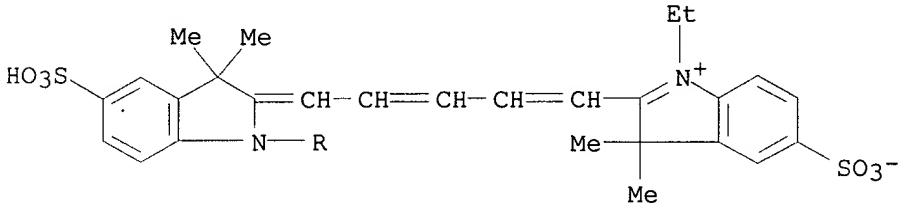
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

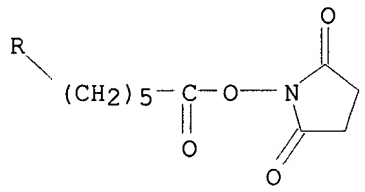
PRAI US 1998-218166 19981222
AB The present invention relates to compns., app. and methods useful for concurrently performing multiple, **high throughput,** biol. or chem. assays, using repeated **arrays** of probes, called Multi **Array** Plate Screen (MAPS). A **combination** of the invention comprises a surface, which comprises a plurality of test regions, at least two of which, and in a preferred embodiment, at least twenty of which, are substantially identical, wherein each of the test regions comprises an **array** of generic anchor mols. The anchors are assocd. with bifunctional linker mols., each contg. a portion which is specific for at least one of the anchors and a portion which is a probe specific for a target of interest. The resulting **array** of probes is used to analyze the presence or test the activity of one or more target mols. which specifically interact with the probes. In one embodiment of the invention, the test regions (which can be wells) are further subdivided into smaller subregions (indentations, or dimples). In one embodiment of the invention, ESTs are mapped. In another embodiment, the presence of a target nucleic acid is detected by protecting the target against nuclease digestion with a polynucleotide fragment, and analyzing the protected polynucleotide by mass spectrometry.
IT **146368-14-1,** Cy5
RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(Cy5, fluorescent probe; **high throughput** assay system using Multi **Array** Plate Screen, nuclease protection, oligonucleotide anchors, bifunctional linkers, and mass spectrometry)

RN 146368-14-1 HCAPLUS

CN 3H-Indolium, 2-[5-[1-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1,3-pentadienyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)





RE.CNT 11

RE

(1) Affymax Tech Nv; EP 0721016 A 1996
(2) Blok, H; WO 9731256 A 1997
(7) Little, D; ANALYTICAL CHEMISTRY 1997, V69(22), P4540 HCAPLUS
(8) Niemeyer, C; NUCLEIC ACIDS RESEARCH 1994, V22(25), P5530 HCAPLUS
(11) Tang, K; RAPID COMMUNICATIONS IN MASS SPECTROMETRY 1994, V8(2) HCAPLUS

ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d bib abs hitstr 3

L55 ANSWER 3 OF 37 HCAPLUS COPYRIGHT 2000 ACS
AN 2000:441672 HCAPLUS
DN 133:55627
TI Integrated portable biological detection system
IN Cheng, Jing; Wu, Lei; Heller, Michael; Sheldon, Ed; Diver, Jonathan; O'Connell, James P.; Smolko, Dan; Jalali, Shila; Willoughby, David
PA Nanogen, Inc., USA
SO PCT Int. Appl., 67 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| PI WO 2000037163 | A1 | 20000629 | WO 1999-US31098 | 19991222 |

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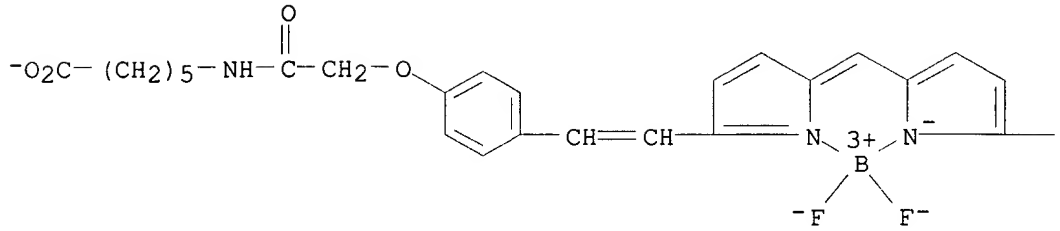
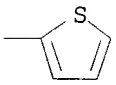
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRAI US 1998-113730 19981223
AB Provided is an integrated, portable system and device for performing active, integrated multi-step sample prepn. and mol. diagnostic anal. of biol. samples using a minimal no. of electronically addressable microchips. Bacterial and cancer cells were sepd. from peripheral human blood in microfabricated electronic chips by dielectrophoresis. The isolated cells were examd. by staining the nuclei with fluorescent dye followed by laser induced fluorescence imaging. DNA and RNA were released from the isolated cells electronically and specific marker sequences were detected by DNA amplification followed by electronic hybridization to immobilized capture probes. Efforts towards the construction of a "lab.-on-a-chip" system are presented which involves the selection of DNA probes, dyes, reagents and prototyping of the fully integrated portable instrument.
IT **209340-49-8D**, conjugates with oligonucleotide probe
RL: ARG (Analytical reagent use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(integrated portable biol. detection system)
RN 209340-49-8 HCAPLUS
CN Borate(1-), difluoro[6-[[[4-[2-[2-[[5-(2-thienyl)-1H-pyrrol-2-yl-.kappa.N]methylene]-2H-pyrrol-5-yl-.kappa.N]ethenyl]phenoxy]acetyl]amino]hexanoato(2-)]-, hydrogen, (T-4)- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



RE.CNT 3
RE
(1) Hansen; US 4661451 A 1987
(2) Heller; US 5605662 A 1997
(3) Pethig; US 5795457 A 1998

=> d bib abs hitstr 4

L55 ANSWER 4 OF 37 HCAPLUS COPYRIGHT 2000 ACS
AN 2000:383760 HCAPLUS
DN 133:13385
TI Applications with and methods for producing selected interstrand crosslinks in nucleic acid
PA Kreatech Biotechnology B.V., Neth.
SO Eur. Pat. Appl., 21 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

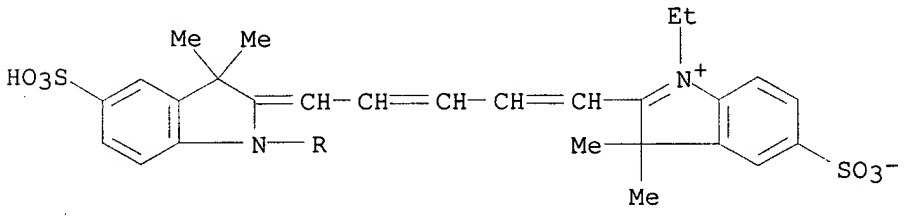
| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| PI EP 1006199 | A1 | 20000607 | EP 1998-204094 | 19981203 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO | | | | |
| EP 1006200 | A2 | 20000607 | EP 1999-204141 | 19991203 |
| EP 1006200 | A3 | 20001011 | | |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO | | | | |
| WO 2000032814 | A2 | 20000608 | WO 1999-NL740 | 19991203 |
| W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |

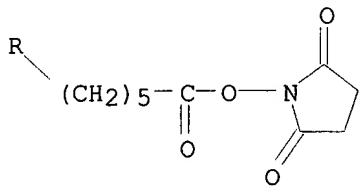
PRAI EP 1998-204094 19981203
AB The invention provides methods and means for generating interstrand crosslinks in nucleic acid at certain specific locations in said nucleic acid. Said certain specific locations in said nucleic acid can be selected from other locations through hybridizing nucleic acid present in said selected location with complementary nucleic acid. In one aspect the invention provides a method for providing at least one selected sequence in a nucleic acid with interstrand crosslinks comprising hybridizing at least one selected single-strand sequence with a complementary single strand nucleic acid wherein said selected sequence or said complementary nucleic acid or both comprise a crosslinking agent [e.g., trans-dichlorodiammineplatinum(II)]. The selected interstrand crosslinks hamper further hybridization and/or replication/amplification of said selected sequences, and the selected sequence preferably comprises at least one repetitive sequence. The invention provides a special labeling technique of probes, called COBRA (**COmbined** Binary RAtio labeling) to achieved FISH multiplicity of 24 or more. The means and methods of the invention may be used in and beneficial for a wide variety of applications, such as the generation of nucleic acid probes and the treatment of diseases such as cancer.
IT **146368-14-1**, Cy5 **146368-16-3**, Cy3
RL: BUU (Biological use, unclassified); RCT (Reactant); BIOL (Biological study); USES (Uses)

(applications with and methods for producing selected interstrand crosslinks in nucleic acid)

RN 146368-14-1 HCAPLUS

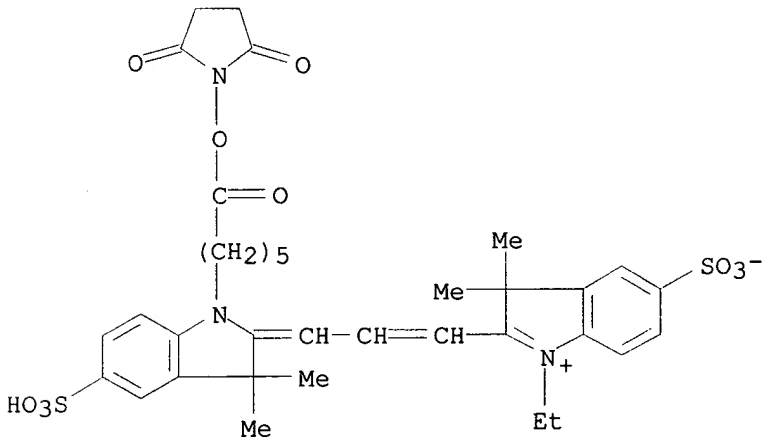
CN 3H-Indolium, 2-[5-[1-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1,3-pentadienyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)





RN 146368-16-3 HCAPLUS

CN 3H-Indolium, 2-[3-[1-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1-propenyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)



RE.CNT 8

RE

(1) Centre Nat Rech Scient; FR 2755146 A 1998

(2) Cimino, G; US 5652096 A 1997

(3) Craig, J; HUMAN GENETICS 1997, V100(3/04), P472

(4) Hampson, I; US 5589339 A 1996
(6) LI, T; US 5831073 A 1998 HCAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d bib abs hitstr 5

L55 ANSWER 5 OF 37 HCAPLUS COPYRIGHT 2000 ACS
AN 2000:368704 HCAPLUS
DN 133:14300
TI In situ method of analyzing cells by staining with multiple stains and using a spectral data **collection** device
IN Garini, Yuval; Mcnamara, George; Soenksen, Dirk G.; Cabib, Dario; Buckwald, Robert A.
PA Applied Spectral Imaging Ltd., Israel
SO PCT Int. Appl., 129 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

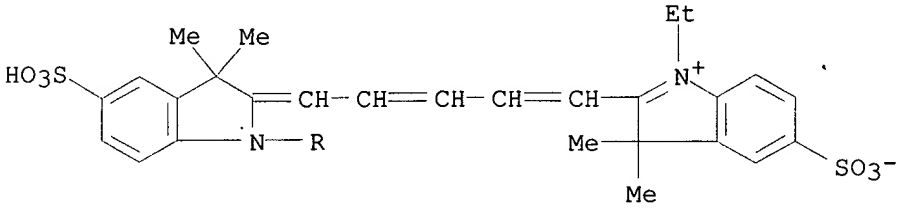
| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| PI WO 2000031534 | A1 | 20000602 | WO 1999-US27000 | 19991116 |

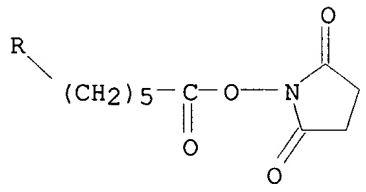
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRAI US 1998-196690 19981120
AB A method of in situ anal. of a biol. sample comprises the steps of (a) staining the biol. sample with N stains of which a first stain is selected from the group consisting of a first immunohistochem. stain, a first histol. stain and a first DNA ploidy stain, and a second stain is selected from the group consisting of a second immunohistochem. stain, a second histol. stain and a second DNA ploidy stain, with provisions that N is an integer greater than three and further that (i) if the first stain is the first immunohistochem. stain then the second stain is either the second histol. stain or the second DNA ploidy stain; (ii) if the first stain is the first histol. stain then the second stain is either the second immunohistochem. stain or the second DNA ploidy stain; whereas (iii) if the first stain is the first DNA ploidy stain then the second stain is either the second immunohistochem. stain or the second histol. stain; and (b) using a spectral data **collection** device for **collecting** spectral data from the biol. sample, the spectral data **collection** device and the N stains are selected so that a spectral component assocd. with each of the N stains is **collectible**. Figure (1) shows a block diagram illustrating the main components of an imaging spectrometer. Breast cancer tissue samples were stained with two histol. stains (hematoxylin and eosin), and four immunohistochem. stains (DAB, AEC, Fast Red, and BCIP/NBT) and measured using the Spectracube system.
IT **146368-14-1**, Cy5 **146368-16-3**, Cy3
RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); ANST

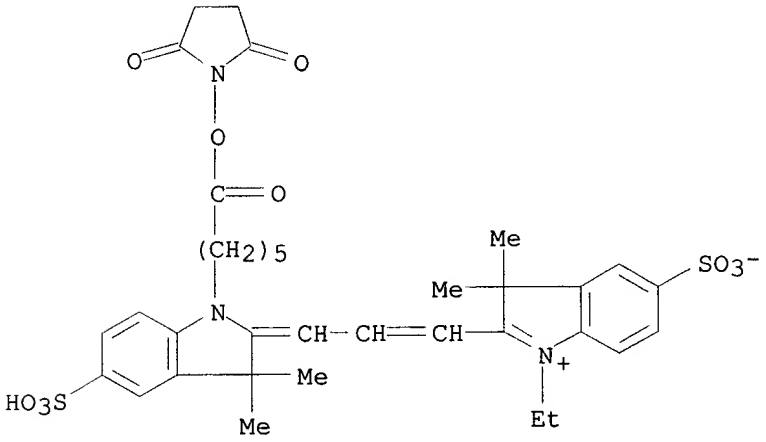
(Analytical study); BIOL (Biological study); USES (Uses)
(as label; in situ method of analyzing cells by staining with multiple stains and using a spectral data **collection** device)

RN 146368-14-1 HCAPLUS
CN 3H-Indolium, 2-[5-[1-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1,3-pentadienyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)





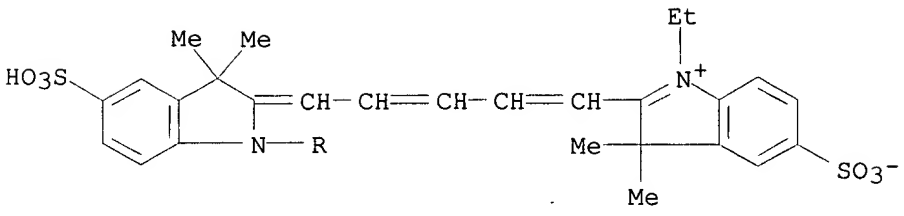
RN 146368-16-3 HCAPLUS
CN 3H-Indolium, 2-[3-[1-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1-propenyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)

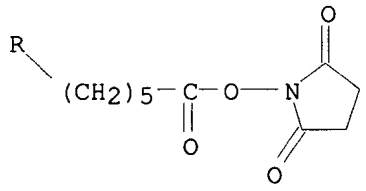


RE.CNT 1
RE
(1) McNamara; US 6007996 A 1999

=> d bib abs hitstr 6

L55 ANSWER 6 OF 37 HCAPLUS COPYRIGHT 2000 ACS
AN 2000:347473 HCAPLUS
DN 133:26285
TI Comparison of orthogonal and collinear geometric approaches for design of a laboratory constructed diode laser induced fluorescence detector for capillary electrophoresis
AU Nagaraj, Sriram; Karnes, H. Thomas
CS Department of Pharmaceutics, Virginia Commonwealth University, Richmond, VA, 23298-0533, USA
SO Instrum. Sci. Technol. (2000), 28(2), 119-129
CODEN: ISCTEF; ISSN: 1073-9149
PB Marcel Dekker, Inc.
DT Journal
LA English
AB This work describes the design and construction of two sensitive fluorescence detectors for capillary electrophoresis employing a semiconductor diode laser as the light source. The two systems employed different geometric approaches - an orthogonal design and a collinear design, for **collection** of the fluorescence. The systems were evaluated using Cy5.29 carboxylic acid, a far-red dicarbocyanine dye. A limit of detection (LOD), calcd. as three times the std. deviation of the blank signal, of 7.4 .times. 10-11 M was obtained using the orthogonal system. The precision and accuracy of the assay detd. using the orthogonal system were within 10% relative std. deviation and 10% DFN (deviation from nominal) resp. The collinear design yielded a LOD of 1.2 .times. 10-12 M.
IT **146368-14-1**
RL: ARU (Analytical role, unclassified); PRP (Properties); ANST (Analytical study)
(in evaluation of orthogonal and collinear geometric approaches for design of lab. constructed diode laser induced fluorescence detector for capillary electrophoresis)
RN 146368-14-1 HCAPLUS
CN 3H-Indolium, 2-[5-[1-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1,3-pentadienyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)





RE.CNT 20
RE
(1) Albin, M; Anal Chem 1993, V65, P489A HCAPLUS
(4) Chen, F; J Chromatogr A 1993, V652, P355 HCAPLUS
(5) Hernandez, L; J Chromatogr 1990, V502, P247 HCAPLUS
(6) Hernandez, L; J Chromatogr 1991, V559, P183 HCAPLUS
(7) Hernandez, L; J Chromatogr A 1993, V652, P399 HCAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

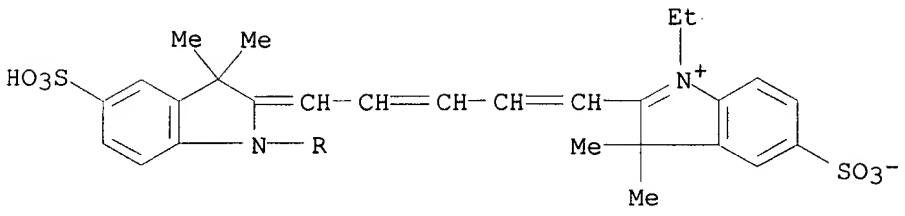
=> d bib abs hitstr 7

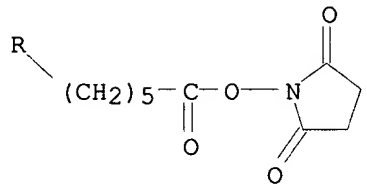
L55 ANSWER 7 OF 37 HCAPLUS COPYRIGHT 2000 ACS
AN 2000:314868 HCAPLUS
DN 132:319489
TI Amplified **array** analysis method and system
IN Borrow, Mark N.; Adler, Karl Edwin
PA Nen Life Science Products, Inc., USA
SO PCT Int. Appl., 19 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| PI WO 2000026409 | A1 | 20000511 | WO 1999-US25616 | 19991101 |

W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRAI US 1998-106653 19981102
AB The present invention concerns an **array**-based anal. system and method having an enhanced sensitivity which allows for simple and rapid anal. of relative unmodified samples which comprises an anal. system of the type having a plurality of different first members of a specific binding pair affixed in an **array** thereupon, a mixt. including at least one second member of a specific binding pair capable of binding to one of the first members so as to form a specific binding pair which is affixed to the support member, and a reporter system that produces a detectable signal indicative of the presence of the specific binding pair on the support member and wherein the reporter system includes an amplified reporter system that is independent of layering.
Biotin-labeled
cDNA was prepd. from 4 .mu.g Jurkat total RNA using the MICROMAX human cDNA Microarray System I kit reagents and protocols. Hybridization to Practice Slides and amplified detection used streptavidin-HRP and cyanine 5 tyramide.
IT **146368-14-1D**, Cy5, reaction with tyramine
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(Cy5; amplified **array** anal. method and system)
RN 146368-14-1 HCAPLUS
CN 3H-Indolium, 2-[5-[1-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1,3-pentadienyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)

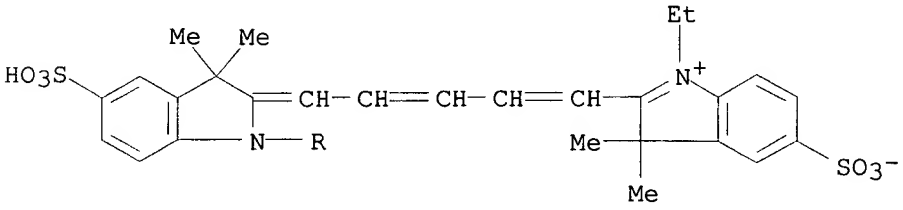


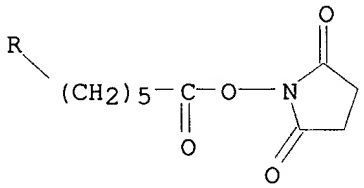


RE.CNT 3
RE
(1) Bobrow; US 5583001 A 1996
(2) Fodor; US 5800992 A 1998
(3) Hopman; J Histochem Cytochem 1998, V46(7), P771

=> d bib abs hitstr 8

L55 ANSWER 8 OF 37 HCAPLUS COPYRIGHT 2000 ACS
AN 2000:295029 HCAPLUS
DN 133:70867
TI Fluorescence measurements on nanotiter plates
AU Hessling, M.; Ihlemann, J.; Marowsky, G.
CS Laser-Laboratorium Gottingen e.V. (LLG), Gottingen, D-37077, Germany
SO Rev. Sci. Instrum. (2000), 71(5), 2201-2205
CODEN: RSINAK; ISSN: 0034-6748
PB American Institute of Physics
DT Journal
LA English
AB Two different highly sensitive and fast but low-cost instruments for fluorescence measurements on nanotiter plates or other high d. sample **arrays** are presented. Both instruments use 635 nm diode lasers for the detection of Cy5 fluorescence. In the first device all cavities of the nanotiter plate are illuminated simultaneously and the fluorescence is detected spatially resolved by a charge-coupled device camera within a few seconds. The second system uses an on-chip microscanner for the sequential illumination of the samples and the fluorescence is detected by a simple photomultiplier tube. Both instruments have originally been developed for environmental anal. by immunochem. labeling but they can also be used for other medical and biol. purposes where analyte concns. have to be detd.
IT **146368-14-1**
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(Cy5; fluorescence measurements on nanotiter plates)
RN 146368-14-1 HCAPLUS
CN 3H-Indolium, 2-[5-[1-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1,3-pentadienyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)



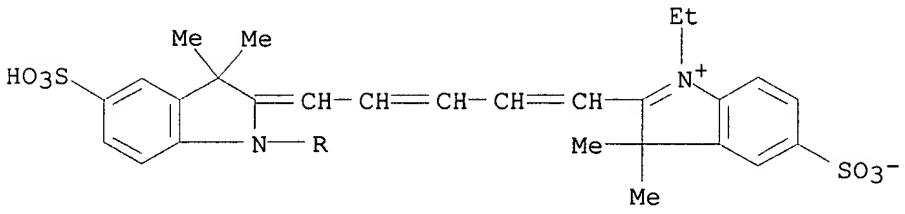



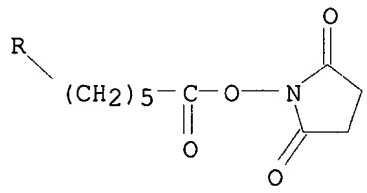

Searched by John Dantzman 703-308-4488

RE.CNT 12
RE
(1) Brecht, A; Proc Biosensors for Environmental Diagnostics 1998, P11
(4) Hessling, M; Proc SPIE 1999, V3534, P554 HCAPLUS
(9) Schober, A; Biotechniques 1993, V15, P324 HCAPLUS
(10) Stryer, L; Annu Rev Biochem 1978, V47, P819 HCAPLUS
(11) Ullman, E; J Biol Chem 1976, V251, P4172 HCAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d bib abs hitstr 9

L55 ANSWER 9 OF 37 HCAPLUS COPYRIGHT 2000 ACS
AN 2000:282111 HCAPLUS
DN 133:147108
TI Ratiometric Analysis of Single-Molecule Fluorescence Resonance Energy Transfer Using Logical **Combinations** of Threshold Criteria: A Study of 12-mer DNA
AU Ying, Liming; Wallace, Mark I.; Balasubramanian, Shankar; Klenerman, David
CS Department of Chemistry, University of Cambridge, Cambridge, CB2 1EW, UK
SO J. Phys. Chem. B (2000), 104(21), 5171-5178
CODEN: JPCBFK; ISSN: 1089-5647
PB American Chemical Society
DT Journal
LA English
AB Single-mol. fluorescence resonance energy transfer (FRET) **combined** with bulk fluorescence lifetimes, anisotropy, and spectra have been used to study a donor-acceptor labeled model DNA system (Cy5-5'-ACCTGCCGACGC-3'-TMR). A general ratiometric anal. method using independent donor and acceptor thresholding has been developed. Use of two logical **combinations** of thresholding criteria provides more information than either method alone, revealing heterogeneity within this system. Conditions yielding similar bulk fluorescence spectra can be readily distinguished by this single-mol. method. Fluorescence lifetimes and anisotropy measurements also suggest nonnegligible fluorophore-DNA interaction.
IT **146368-14-1D**, Cy5, reaction with oligonucleotides
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)
(Cy5; ratiometric anal. of single-mol. fluorescence resonance energy transfer using logical **combinations** of threshold criteria for the study of 12-mer DNA)
RN 146368-14-1 HCAPLUS
CN 3H-Indolium, 2-[5-[1-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1,3-pentadienyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)





RE.CNT 50
RE
(1) Bartko, A; J Phys Chem B 1999, V103, P11237 HCAPLUS
(2) Bopp, M; Proc Natl Acad Sci USA 1997, V94, P10630 HCAPLUS
(5) Clegg, R; Methods Enzymol 1992, V211, P353 HCAPLUS
(6) Clegg, R; Proc Natl Acad Sci USA 1993, V90, P2994 HCAPLUS
(7) Dahan, M; Chem Phys 1999, V247, P85 HCAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d bib abs hitstr 10

L55 ANSWER 10 OF 37 HCAPLUS COPYRIGHT 2000 ACS
AN 2000:260581 HCAPLUS
DN 132:289573
TI Fluorescent probes for chromosomal painting
IN Cherif, Dorra
PA Genset, Fr.
SO PCT Int. Appl., 39 pp.
CODEN: PIXXD2
DT Patent
LA French
FAN.CNT 1

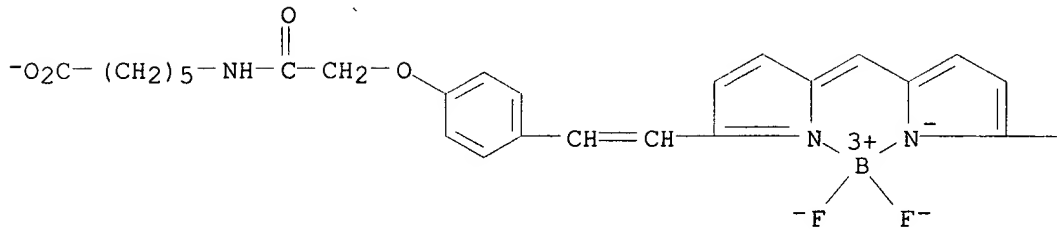
| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | WO 2000022164 | A1 | 20000420 | WO 1999-FR2517 | 19991015 |
| | W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| | RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |
| | FR 2784683 | A1 | 20000421 | FR 1998-12957 | 19981015 |
| | AU 9960981 | A1 | 20000501 | AU 1999-60981 | 19991015 |
| PRAI | FR 1998-12957 | | 19981015 | | |
| | WO 1999-FR2517 | | 19991015 | | |

AB The invention concerns fluorescent probes used in multicolor in situ fluorescent hybridization methods, and principally chromosomal painting. The probes designed for marking a chromosome are such that they consist of a set of DNA segments more represented in certain chromosomal bands and are obtained by Interspersed Repeated Sequence-PCR amplification from said chromosomes using PCR primers specific for the repeated and dispersed DNA sequences Alu and LINE. The invention further concerns methods for producing said probes, multicolor FISH methods capable of using said probes, and diagnostic kits comprising them. The invention also concerns **combinations** of fluorophores and optical filters.

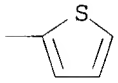
IT **209340-49-8DP**, BODIPY 630/650, conjugates with probes
RL: ARG (Analytical reagent use); BPN (Biosynthetic preparation); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
(BODIPY 630/650; fluorescent probes for chromosomal painting)

RN 209340-49-8 HCAPLUS
CN Borate(1-), difluoro[6-[[[4-[2-[2-[[5-(2-thienyl)-1H-pyrrol-2-yl-.kappa.N]methylene]-2H-pyrrol-5-yl-.kappa.N]ethenyl]phenoxy]acetyl]amino]hexanoato(2-)]-, hydrogen, (T-4)- (9CI) (CA INDEX NAME)

PAGE 1-A



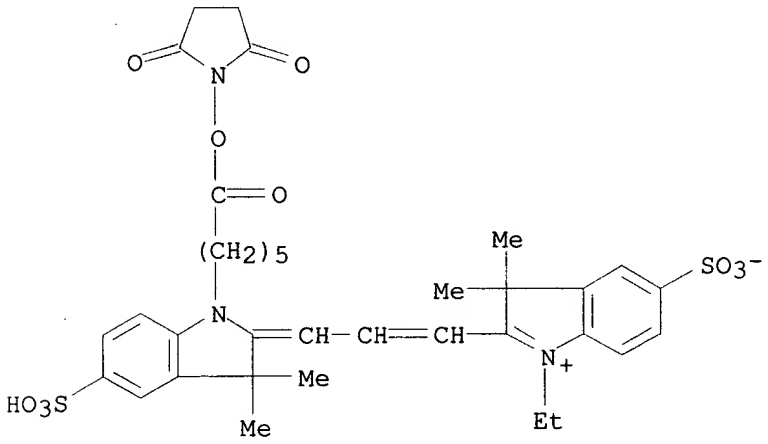
PAGE 1-B



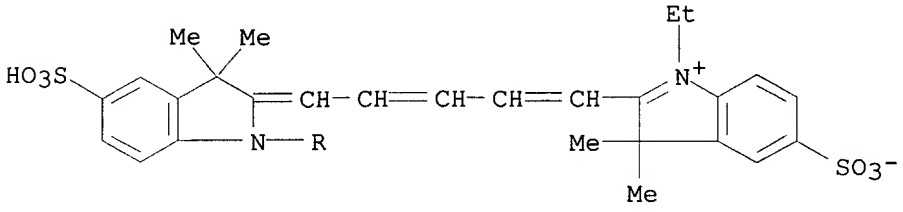
IT **146368-16-3DP**, Cy3, conjugates with probes
RL: ARG (Analytical reagent use); BPN (Biosynthetic preparation); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
(Cy3; fluorescent probes for chromosomal painting)

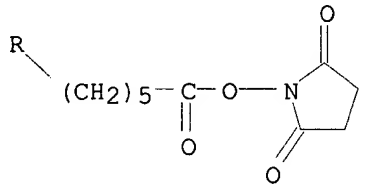
RN 146368-16-3 HCAPLUS

CN 3H-Indolium, 2-[3-[1-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1-propenyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)



IT **146368-14-1DP**, Cy5, conjugates with probes
RL: ARG (Analytical reagent use); BPN (Biosynthetic preparation); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
(Cy5; fluorescent probes for chromosomal painting)
RN 146368-14-1 HCAPLUS
CN 3H-Indolium, 2-[5-[1-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1,3-pentadienyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)





RE.CNT 9
RE
(1) Buckwald, R; US 5817462 A 1998 HCAPLUS
(2) Ledbetter, S; GENOMICS 1990, V6, P475 HCAPLUS
(3) Lengauer; HUMAN GENETICS 1990, V86, P1 HCAPLUS
(4) Lichter, P; PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF USA 1990, V87(17), P6634 HCAPLUS
(8) Speicher, M; NATURE GENETICS 1996, V12, P368 HCAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d bib abs hitstr 11

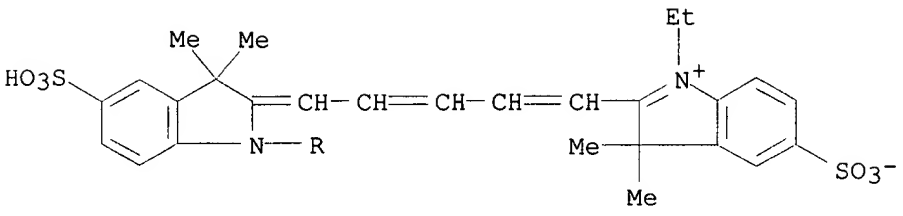
L55 ANSWER 11 OF 37 HCAPLUS COPYRIGHT 2000 ACS
AN 2000:203017 HCAPLUS
DN 132:233995
TI Method of sequencing nucleic acids by applying a computer alignment algorithm to electrophoretic separation patterns of dideoxy-terminated fragment mixtures
IN Mccormick, Randy M.; Briggs, Jonathan
PA Aclara Biosciences, USA
SO U.S., 29 pp., Cont.-in-part of U.S. 636,414, abandoned.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 1

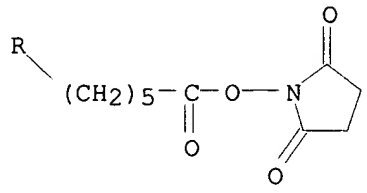
| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| US 6043036 | A | 20000328 | US 1997-977931 | 19971124 |

PRAI US 1996-636414 19960423

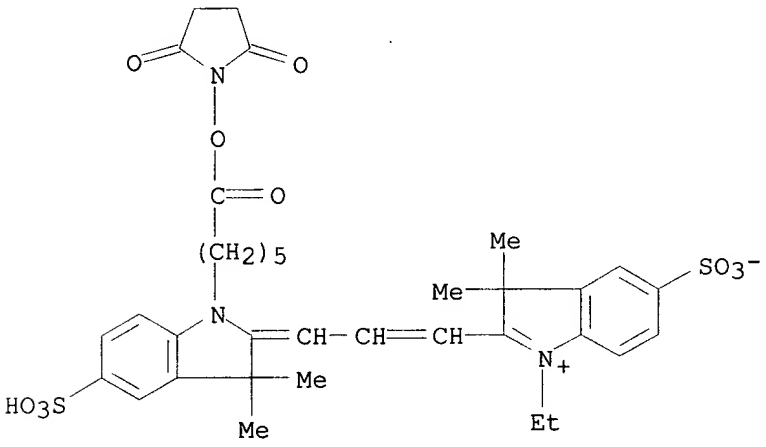
AB The present invention describes a method of sequencing nucleic acids in which mixts. of oligonucleotide fragments are derived from sequencing reactions using **combinations** of the 2',3'-dideoxynucleoside 5'-triphosphate or 3' deoxynucleoside 5'-triphosphate terminators and appropriate concns. of four dNTPs (2'-deoxynucleoside 5' triphosphates, e.g., dATP, dCTP, dGTP, dTTP, dITP, 7-deaza-GTP). These fragments are generated by enzymic extension of a primer hybridized to the single-stranded template DNA to be sequenced. In contrast to common slab gel sequencing methods, the method of the instant invention does not require precise alignment of the four sepn. sets of the terminated fragments to permit deduction of the DNA sequence. Instead the relative positions of the nucleotide bases in sep. mixts. can be deduced from binary-coded sequence string sets corresponding to the presence or absence of particular fragments by applying a computer alignment algorithm. In addn., the method possesses inherent redundancy in the sepns., which facilitates sequence assignment by resolving sequence uncertainties or anomalies. The method was applied to the detn. of the known sequence of M13mp18 DNA, and a lengthy stretch of sequence in the middle was correctly detd.

IT **146368-14-1D**, FluoroLink Mono Reactive Dye Cy5, conjugate with sequencing primers **146368-16-3D**, FluoroLink Mono Reactive Dye Cy3, conjugate with sequencing primers
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(method of sequencing nucleic acids by applying a computer alignment algorithm to electrophoretic sepn. patterns of dideoxy-terminated fragment mixts.)
RN 146368-14-1 HCAPLUS
CN 3H-Indolium, 2-[5-[1-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1,3-pentadienyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)





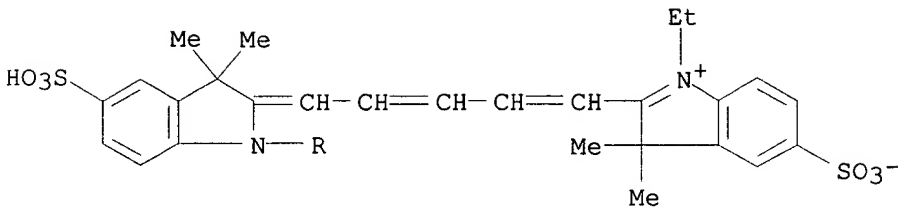
RN 146368-16-3 HCAPLUS
CN 3H-Indolium, 2-[3-[1-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1-propenyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)

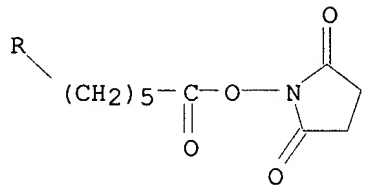


RE.CNT 6
RE
(1) Ansorge; US 5124247 1992
(2) Hunkapillar; US 4811218 1989
(3) Konrad; US 5273638 1993
(4) Orgel; US 4865968 1989
(5) Tabor; US 5409811 1995
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d bib abs hitstr 12

L55 ANSWER 12 OF 37 HCAPLUS COPYRIGHT 2000 ACS
AN 2000:187844 HCAPLUS
DN 133:116994
TI A fluorescence based non-radioactive electrophoretic mobility shift assay
AU Ruscher, K.; Reuter, M.; Kupper, D.; Trendelenburg, G.; Dirnagl, U.; Meisel, A.
CS Schumannstrasse 20-21, Klinik fur Neurologie, Humboldt Universitat zu Berlin, Berlin, D-10098, Germany
SO J. Biotechnol. (2000), 78(2), 163-170
CODEN: JBITD4; ISSN: 0168-1656
PB Elsevier Science Ltd.
DT Journal
LA English
AB Electrophoretic mobility shift assay (EMSA) or gel shift assay is one of the most powerful methods for studying protein-DNA interactions. Typically, 32P-labeled DNA probes contg. the sequence bound by the protein of interest are used in EMSA (rEMSA). Although rEMSA is sensitive and practicable, it relies on the handling of hazardous radioisotopes, and does not easily allow quantification. We developed a non-radioactive procedure using fluorescence (Cyano dye Cy5) labeled oligodeoxynucleotide duplexes as specific probes (fEMSA) and an automatic DNA sequencer for anal. Testing different DNA-binding proteins (restriction endonuclease EcoRII, transcription factor NF.kappa.B and it's subunit p50) the results in fEMSA and rEMSA are similar in regard to quality, reproducibility, and sensitivity. The fEMSA allows a semiquant. screening of large amts. of samples for specific DNA binding activities and is, therefore, a **high throughput** technol. for semiquant. anal. of DNA-protein interaction.
IT **146368-14-1D**, Cy5, oligodeoxynucleotide conjugates
RL: ANT (Analyte); ARU (Analytical role, unclassified); BPR (Biological process); ANST (Analytical study); BIOL (Biological study); PROC (Process)
(Cy5; fluorescence based non-radioactive electrophoretic mobility shift assay for DNA-binding proteins)
RN 146368-14-1 HCAPLUS
CN 3H-Indolium, 2-[5-[1-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1,3-pentadienyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)





RE.CNT 7
RE
(1) Berger, R; BioTechniques 1993, V15, P650 HCAPLUS
(3) Ludwig, L; Nucleic Acids Res 1995, V23, P3792 HCAPLUS
(4) Reuter, M; J Biol Chem 1998, V273(14), P8294 HCAPLUS
(5) Reuter, M; J Biol Chem 1999, V274(8), P5213 HCAPLUS
(6) Revzin, A; BioTechniques 1989, V7, P346 HCAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

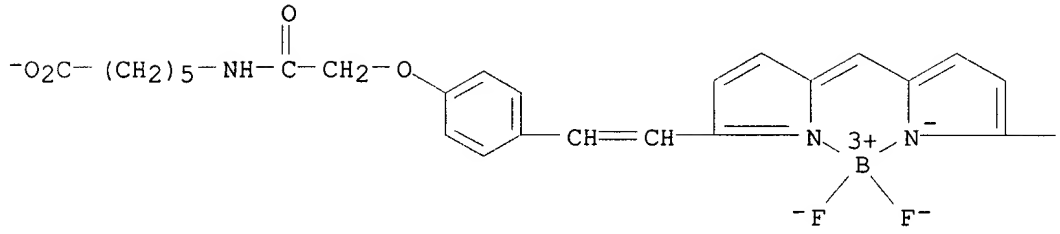
=> d bib abs hitstr 13

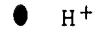
L55 ANSWER 13 OF 37 HCAPLUS COPYRIGHT 2000 ACS
AN 2000:53947 HCAPLUS
DN 132:103733
TI Methods for determining cross-hybridization based on dissociation kinetics
IN Burchard, Julja; Stoughton, Roland; Friend, Stephen H.
PA Rosetta Inpharmatics, Inc., USA
SO PCT Int. Appl., 72 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | WO 2000003039 | A1 | 20000120 | WO 1999-US15813 | 19990713 |
| | W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| | RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |
| | AU 9950992 | A1 | 20000201 | AU 1999-50992 | 19990713 |
| PRAI | US 1998-92512 | | 19980713 | | |
| | US 1999-335971 | | 19990618 | | |
| | WO 1999-US15813 | | 19990713 | | |

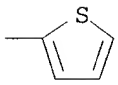
AB The present invention provides methods for distinguishing the fractions of polynucleotide sequences which hybridize to any given probe, including probes on microarrays such as those described herein. In particular, the present invention enables users to identify the fraction of sequences which are perfectly complementary to a probe, thereby correcting for effects of cross-hybridization in a hybridization assay. The methods of the invention work by monitoring the kinetics of dissocn. of sequences from the probe so that a resulting "dissocn. curve" may be compared to a **combination** of the individual "dissocn. profiles" for each sequence which hybridizes. In alternative embodiments, the invention also provides computer systems for performing the present methods, as well as databases of the dissocn. profiles.
IT **209340-49-8**, BODIPY 630/650
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(BODIPY 630/650, fluorescent indicator; methods for detg. cross-hybridization based on dissocn. kinetics)
RN 209340-49-8 HCAPLUS
CN Borate(1-), difluoro[6-[[[4-[2-[2-[[5-(2-thienyl)-1H-pyrrol-2-yl-.kappa.N]methylene]-2H-pyrrol-5-yl-.kappa.N]ethenyl]phenoxy]acetyl]amino]hexanoato(2-)]-, hydrogen, (T-4)- (9CI) (CA INDEX NAME)

PAGE 1-A





PAGE 1-B



RE.CNT 6
RE
(1) Affymetrix Inc; WO 9812354 A1 1998 HCAPLUS
(2) Blake, R; Denaturation of DNA Molecular Biology and Biotechnology 1995, P207
(3) Ikuta; Nuc Aci Res 1987, V15(2), P797 HCAPLUS
(4) Stimpson; US 5599668 A 1997
(5) Stimpson; Proc Natl Acad Sci USA 1995, V92, P6379 HCAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d bib abs hitstr 14

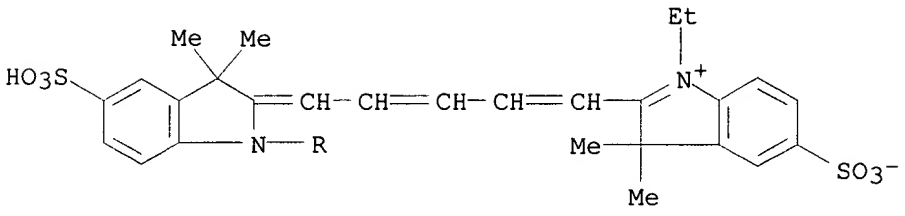
L55 ANSWER 14 OF 37 HCAPLUS COPYRIGHT 2000 ACS
AN 1999:819571 HCAPLUS
DN 132:59136
TI **High-throughput** methods, systems and apparatus for performing cell-based screening assays
IN Wada, H. Garrett; Sundberg, Steven A.; Alajoki, Marja Liisa
PA Caliper Technologies Corp., USA
SO PCT Int. Appl., 81 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

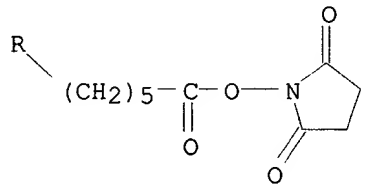
| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | WO 9967639 | A1 | 19991229 | WO 1999-US13918 | 19990621 |
| | W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| | RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |
| | AU 9949570 | A1 | 20000110 | AU 1999-49570 | 19990621 |
| PRAI | US 1998-104519 | | 19980625 | | |
| | US 1999-117370 | | 19990127 | | |
| | US 1998-117370 | | 19990127 | | |
| | WO 1999-US13918 | | 19990621 | | |

AB Methods are disclosed for detg. a function of cells, which comprises a suspension of cells flowing along a first fluid channel. The cells have a first detectable property assocd. therewith, and the cells produce a second detectable property upon activation of the function of the cells, the first and second detectable properties being distinguishable from each other. The levels of the first and second detectable properties are measured. The level of second detectable property is compared to the level of first detectable property to det. the relative function of the cells. The methodol. of the invention is useful in e.g. the drug discovery process.

IT **146368-14-1D**, Cy5, streptavidin conjugates
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(Cy5; **high-throughput** methods, systems and app. for performing cell-based screening assays)

RN 146368-14-1 HCAPLUS
CN 3H-Indolium, 2-[5-[1-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1,3-pentadienyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)





RE.CNT 16
RE
(1) Allelix Biopharmaceuticals Inc; WO 9858074 A2 1998 HCAPLUS
(4) Brunk; Biophysical Journal 1997, V72, P2820 HCAPLUS
(6) Glucksmann; US 5795726 A 1998 HCAPLUS
(8) Lawrence; Journal of Immunology 1993, V151, P6338 HCAPLUS
(12) Patterson; US 5843640 A 1998 HCAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d bib abs hitstr 15

L55 ANSWER 15 OF 37 HCAPLUS COPYRIGHT 2000 ACS
AN 1999:816973 HCAPLUS
DN 132:45803
TI Multiparametric fluorescence in situ hybridization for identification of human chromosomes and microbial nucleic acids
IN Ward, David C.; Speicher, Michael; Ballard, Stephen Gwyn; Wilson, John T.
PA Yale University, USA
SO U.S., 43 pp., Cont.-in-part of U.S. Ser. No. 88,087, abandoned.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 5

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | US 6007994 | A | 19991228 | US 1998-88845 | 19980602 |
| | US 5759781 | A | 19980602 | US 1996-640657 | 19960501 |
| | WO 9962926 | A1 | 19991209 | WO 1999-US12107 | 19990602 |
| | W: AU, CA, JP | | | | |
| | RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE | | | | |
| | AU 9943247 | A1 | 19991220 | AU 1999-43247 | 19990602 |

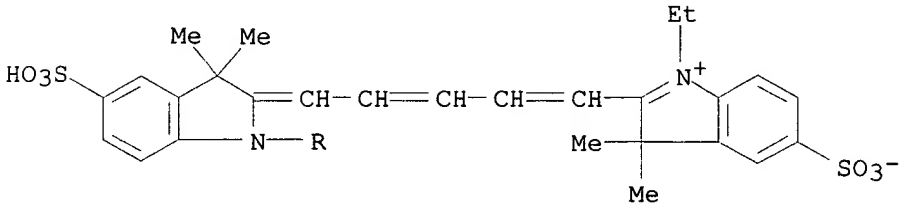
PRAI US 1995-577622 19951222
US 1995-580717 19951229
US 1996-640657 19960501
US 1998-88087 19980601
US 1998-88845 19980602
WO 1999-US12107 19990602

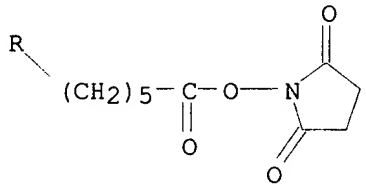
AB Methods and reagents for **combinatorial** labeling of oligonucleotide probes for visualization and simultaneous identification of all human chromosomes or defined sub-regions, and characterization of bacteria, viruses and/or lower eukaryotes present in samples are presented. The method utilizes two sets of **combinatorially** labeled oligonucleotide probes, each member thereof (i) having a predetd. label distinguishable from the label of any other member of said set, and (ii) being capable of specifically hybridizing with a predetd. chromosome or nucleic acid mol. Preferably, each probe is labeled with a **combination** of distinguishable fluorophores as to allow unique identification of all human chromosomes, chromosomal sub-regions, or nucleic acid of preselected bacteria, viruses and/or lower eukaryotes. The method, multiparametric fluorescence in situ hybridization (M-FISH) can be used alone or in concert with nucleic acid amplification methods, either in situ polymerase chain reaction (PCR) or in situ rolling circle amplification.

IT **146368-14-1**, FluoroLink Mono Reactive Dye Cy5 **146368-16-3**, FluoroLink Mono Reactive Dye Cy3
RL: ARU (Analytical role, unclassified); RCT (Reactant); ANST (Analytical study)
(as fluorescent label for probes; multiparametric fluorescence in situ hybridization for identification of human chromosomes and microbial nucleic acids)

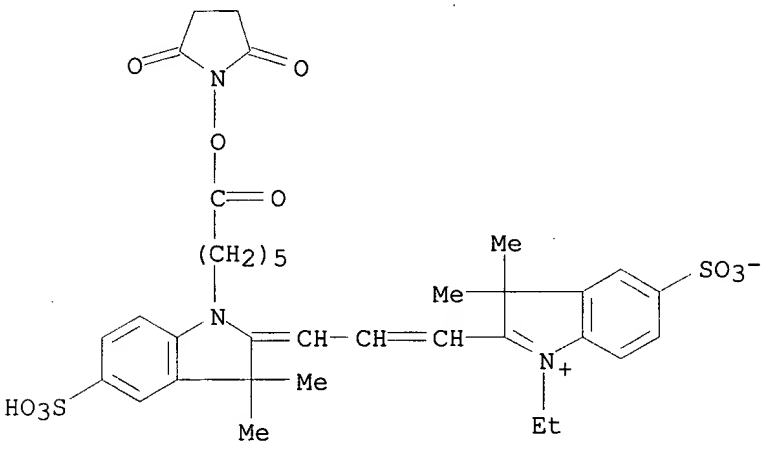
RN 146368-14-1 HCAPLUS
CN 3H-Indolium, 2-[5-[1-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-2H-indol-2-ylidene]-1,3-pentadienyl]-1-ethyl-

3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)





RN 146368-16-3 HCAPLUS
CN 3H-Indolium, 2-[3-[1-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1-propenyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)



RE.CNT 3
RE
(1) Gersdorf; FEMS Immunol Med Microbiol 1993, V6, P109 MEDLINE
(2) Hackstein; Arch Virol 1996, V141, P1293 HCAPLUS
(3) Speicher; Nature Genetics 1996, V12, P368 HCAPLUS

=> d bib abs hitstr 16

L55 ANSWER 16 OF 37 HCAPLUS COPYRIGHT 2000 ACS
AN 1999:784117 HCAPLUS
DN 132:19616
TI Multiparametric fluorescence in situ hybridization using mixtures of probes labeled with different **combinations** of fluorescent reporter groups
IN Ward, David C.; Speicher, Michael; Ballard, Stephen Gwyn; Wilson, John T.
PA Yale University, USA
SO PCT Int. Appl., 124 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 5

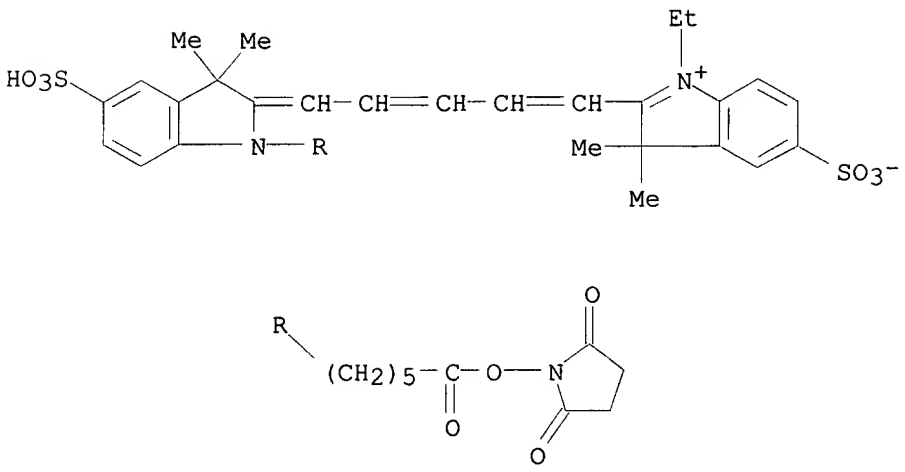
| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | WO 9962926 | A1 | 19991209 | WO 1999-US12107 | 19990602 |
| | W: AU, CA, JP | | | | |
| | RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE | | | | |
| | US 6007994 | A | 19991228 | US 1998-88845 | 19980602 |
| | AU 9943247 | A1 | 19991220 | AU 1999-43247 | 19990602 |

PRAI US 1998-88845 19980602
US 1995-577622 19951222
US 1995-580717 19951229
US 1996-640657 19960501
US 1998-88087 19980601
WO 1999-US12107 19990602

AB The invention relates to a set of **combinatorially** labeled oligonucleotide probes with each member having a predetd. label distinguishable from the label of any other member of the set that can be used in **combination** to simultaneously identify several target sequences in a sample. In particular, sets of probes that can be used to identify all 22 human autosomes and the X and Y chromosomes are described.

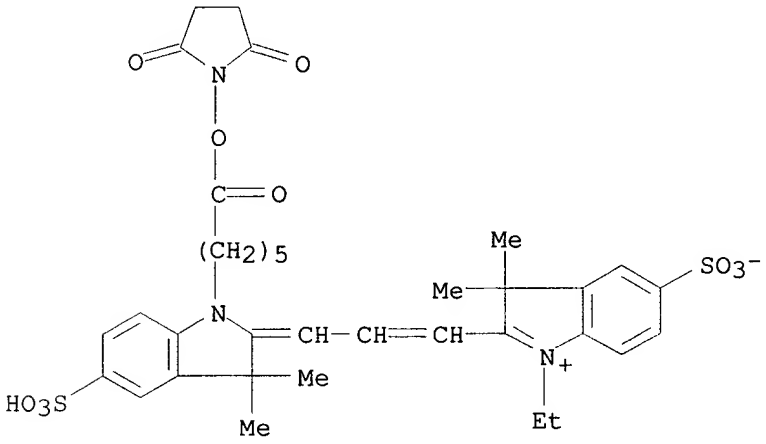
IT **146368-14-1**, FluoroLink Mono Reactive Dye Cy5 **146368-16-3**, FluoroLink Mono Reactive Dye Cy3
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(as fluorochrome; multiparametric FISH using mixts. of probes labeled with different **combinations** of fluorescent reporter groups)

RN 146368-14-1 HCAPLUS
CN 3H-Indolium, 2-[5-[1-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1,3-pentadienyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)





RN 146368-16-3 HCAPLUS
CN 3H-Indolium, 2-[3-[1-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1-propenyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)



RE.CNT 3
RE
(1) Gersdorf, H; FEMS Immun Med Microbiol 1993, V6, P109 MEDLINE
(2) Hackstein; Arch Virol 1996, V141, P1293 HCAPLUS
(3) Speicher; Nature Genetics 1996, P368 HCAPLUS

=> d bib abs hitstr 17

L55 ANSWER 17 OF 37 HCAPLUS COPYRIGHT 2000 ACS
AN 1999:691300 HCAPLUS
DN 131:308583
TI Detection of very low quantities of analyte using analyte binding **arrays**
IN Obremski, Robert J.; Silzel, John W.; Tsay, Tsong-Tseh; Cercek, Bibijana; Dodson, Charles L.; Wang, Tung Rung; Liu, Yagang; Zhou, Shaomin
PA Beckman Coulter, Inc., USA
SO PCT Int. Appl., 40 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| PI WO 9954736 | A1 | 19991028 | WO 1999-US6134 | 19990326 |

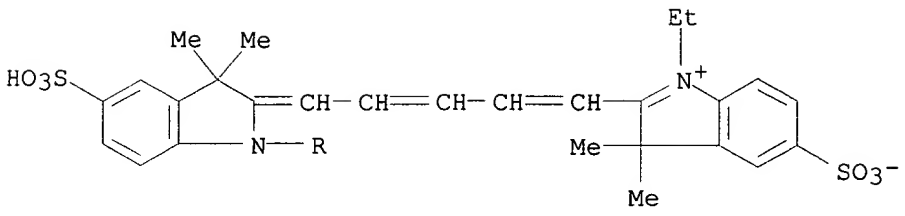
W: JP
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE

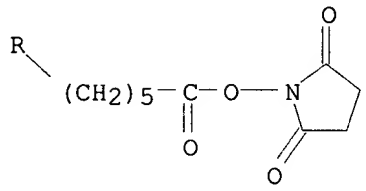
PRAI US 1998-63978 19980421

AB A microscale binding assay, analyte binding **array**, and kits are disclosed, which exploit the mass action law to harvest analyte from a liq. sample. This is achieved by fabrication of sorbent zones having up to ten times the binding capacity per unit area generally obtained on polystyrene microtiter plates. The resulting **arrays** substantially deplete the liq. soln. of analyte during incubation. Accordingly, the assays respond to total mass of analyte in the sample, not analyte concn. This approach, coupled with direct fluorescence detection in the NIR, yields maximal signal intensity and low background for optimal sensitivity. A simple immunoassay of human IgG3 using the mass-sensing micro-**array** approach showed sensitivity equal to a conventional ELISA plate assay. Antibody **arrays** were generated either by incubation of avidin-printed **arrays** with an excess of biotinylated capture antibody, or by direct jet printing of antibody to form multianalyte **arrays**. Polyclonal mouse anti-human IgG antibody labeled with DBCY5 were used to detect bound IgG.

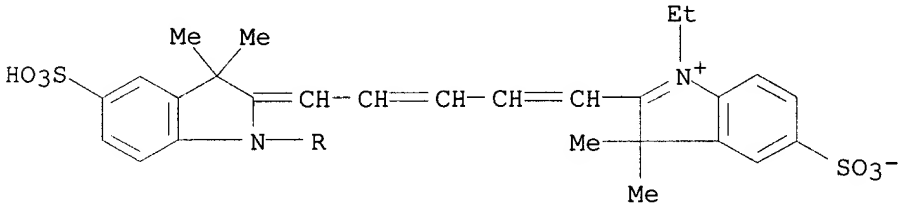
IT **146368-14-1**, Cy5
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(Cy5, analyte capture complex tagging with; detection of very low quantities of analyte using analyte binding **arrays**)

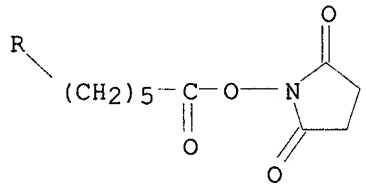
RN 146368-14-1 HCAPLUS
CN 3H-Indolium, 2-[5-[1-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1,3-pentadienyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)





IT **146368-14-1D**, derivs.
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(analyte capture complex tagging with; detection of very low quantities
of analyte using analyte binding **arrays**)
RN 146368-14-1 HCAPLUS
CN 3H-Indolium, 2-[5-[1-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1,3-pentadienyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)





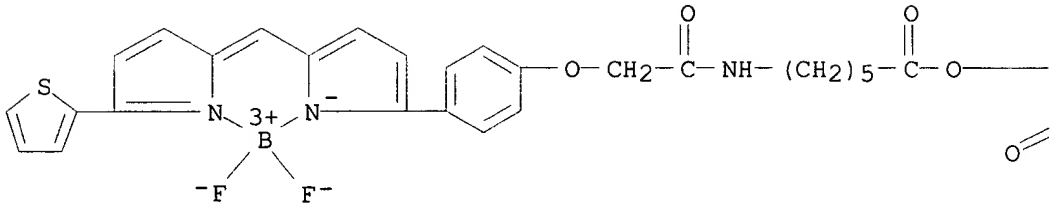
RE.CNT 6
RE
(1) Beckman Instruments Inc; WO 9732212 A 1997
(2) Ekins, R; ANALYTICA CHIMICA ACTA 1989, V227 HCAPLUS
(3) Ekins, R; ANNALES DE BIOLOGIE CLINIQUE 1992, V50(5), P337 HCAPLUS
(4) Kakabakos, S; CLINICAL CHEMISTRY 1992, V38(3), P338 HCAPLUS

(5) Sigal, N; COMB CHEM MOL DIVERSITY DRUG DISCOVERY 1998, P433 HCAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

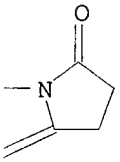
=> d bib abs hitstr 18

L55 ANSWER 18 OF 37 HCAPLUS COPYRIGHT 2000 ACS
AN 1999:688481 HCAPLUS
DN 132:102348
TI Simultaneous Assay of Src SH3 and SH2 Domain Binding Using Different Wavelength Fluorescence Polarization Probes
AU Lynch, Berkley A.; Minor, Charles; Loiacono, Kara A.; van Schravendijk, Marie Rose; Ram, Mary K.; Sundaramoorthi, Raji; Adams, Susan E.; Phillips, Tom; Holt, Dennis; Rickles, Richard J.; MacNeil, Ian A.
CS ARIAD Pharmaceuticals Inc., Cambridge, MA, 02139, USA
SO Anal. Biochem. (1999), 275(1), 62-73
CODEN: ANBCA2; ISSN: 0003-2697
PB Academic Press
DT Journal
LA English
AB Pp60c-src is a prototypical nonreceptor tyrosine kinase and may play a role in diseases as diverse as cancer and osteoporosis. In Src, the SH3 domain (Src homol. 3) binds proteins at specific, proline-rich sequences, while the SH2 domain (Src homol. 2) binds phosphotyrosine-contg. sequences. Inhibition of Src SH3 and SH2 domain function is of potential therapeutic value because of their importance in signaling pathways involved in disease states. We have developed dual-wavelength fluorescent peptide probes for both the Src SH3 and the Src SH2 domains, which allow the simultaneous measurement of compds. binding to each domain in assays based on the technique of fluorescence polarization. We demonstrate the utility of these probes in a dual-binding assay (suitable for **high-throughput** screening) to study the interactions of various peptides with these domains, including a sequence from the rat protein p130CAS which has been reported to bind simultaneously to both Src SH3 and SH2 domains. Utilizing this dual-binding assay, we confirm that sequences from p130CAS can simultaneously bind Src via both its SH3 and its SH2 domains. We also use the dual-binding assay as an internal control to identify substances which inhibit SH3 and SH2 binding via nonspecific mechanisms. (c) 1999 Academic Press.
IT **197306-80-2**, BODIPY TR-X, SE
RL: ARG (Analytical reagent use); BSU (Biological study, unclassified); RCT (Reactant); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(BODIPY TR-X, SE; simultaneous assay of src SH3 and SH2 domain binding using different wavelength fluorescence polarization probes for **high-throughput** screening)
RN 197306-80-2 HCAPLUS
CN Boron, [N-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-2-[4-[5-[[5-(2-thienyl)-2H-pyrrol-2-ylidene-.kappa.N]methyl]-1H-pyrrol-2-yl-.kappa.N]phenoxy]acetamidato]difluoro-, (T-4)- (9CI) (CA INDEX NAME)

PAGE 1-A



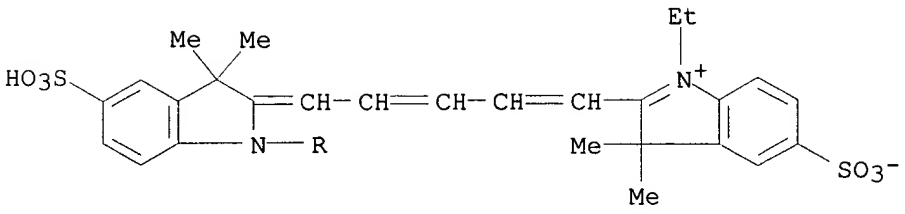
PAGE 1-B

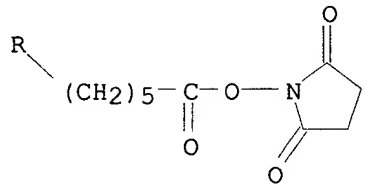


RE.CNT 28
RE
(1) Alexandropoulos, K; Genes Dev 1996, V10, P1341 HCAPLUS
(2) Alligood, K; Bioorg Med Chem Lett 1998, V8, P1189 HCAPLUS
(4) Charifson, P; Biochemistry 1997, V36, P6283 HCAPLUS
(5) Cohen, G; Cell 1995, V80, P237 HCAPLUS
(7) Feng, S; Proc Natl Acad Sci USA 1995, V92, P12408 HCAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d bib abs hitstr 19

L55 ANSWER 19 OF 37 HCAPLUS COPYRIGHT 2000 ACS
AN 1999:684488 HCAPLUS
DN 131:348686
TI Ligand-receptor binding measured by laser-scanning imaging
AU Zuck, Paul; Lao, Zhege; Skwish, Stephen; Glickman, J. Fraser; Yang, Ke; Burbaum, Jonathan; Inglese, James
CS Pharmacopeia Inc., CN5350, Princeton, NJ, 08543, USA
SO Proc. Natl. Acad. Sci. U. S. A. (1999), 96(20), 11122-11127
CODEN: PNASA6; ISSN: 0027-8424
PB National Academy of Sciences
DT Journal
LA English
AB This report describes the integration of laser-scanning fluorometric cytometry and nonsepn. ligand-binding techniques to provide new assay methods adaptable to miniaturization and **high-throughput** screening. Receptor-bound, cyanine dye-labeled ligands, [Cy]ligands, were discriminated from those free in soln. by measuring the accumulated fluorescence assocd. with a receptor-contg. particle. To illustrate the various binding formats accommodated by this technique, satn.- and competition-binding analyses were performed with [Cy]ligands and their cognate receptors expressed in CHO cells or as fusion proteins coated on polystyrene microspheres. We have successfully applied this technique to the anal. of G protein-coupled receptors, cytokine receptors, and SH2 domains. Multiparameter readouts from ligands labeled sep. with Cy 5 and Cy 5.5 demonstrate the simultaneous anal. of two target receptors in a single well. In addn., laser-scanning cytometry has been used to assay enzymes such as phosphatases and in the development of single-step fluorescent immunoassays.
IT **146368-14-1**
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(Cy5; ligand-receptor binding measured by laser-scanning imaging)
RN 146368-14-1 HCAPLUS
CN 3H-Indolium, 2-[5-[1-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1,3-pentadienyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)

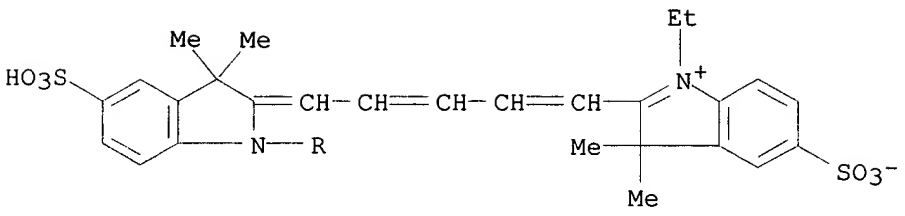


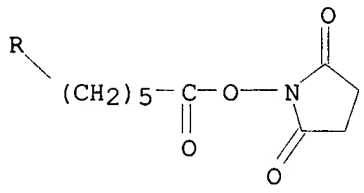


RE.CNT 27
RE
(1) Auer, M; Drug Discovery Today 1998, V3, P457 HCAPLUS
(2) Baggiolini, M; Annu Rev Immunol 1997, V15, P675 HCAPLUS
(3) Brown, S; Protein Expression Purif 1998, V14, P120 HCAPLUS
(4) Burke, T; Biochemistry 1994, V33, P6490 HCAPLUS
(5) Chabala, J; Comb Chem Mol Diversity Drug Discovery 1998, P3 HCAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d bib abs hitstr 20

L55 ANSWER 20 OF 37 HCAPLUS COPYRIGHT 2000 ACS
AN 1999:467576 HCAPLUS
DN 131:348638
TI Fluorescence resonance energy transfer between single fluorophores attached to a coiled-coil protein in aqueous solution
AU Ishii, Yoshiharu; Yoshida, Tomoko; Funatsu, Takashi; Wazawa, Tetsuichi; Yanagida, Toshio
CS Single Molecule Processes Project, ICORP JST, Mino, Osaka, Japan
SO Chem. Phys. (1999), 247(1), 163-173
CODEN: CMPHC2; ISSN: 0301-0104
PB Elsevier Science B.V.
DT Journal
LA English
AB Fluorescence resonance energy transfer (FRET) is a technique to detect the structural changes in biomols. We extended this technique to the single-mol. level in aq. soln., by **combining** it with total internal reflection fluorescence microscopy. Both multiple color images and fluorescence spectra at the single-mol. level were obtained to det. FRET from Cy3 to Cy5 attached to .alpha.-tropomyosin (.alpha.Tm), a coiled-coil of homodimer. The FRET properties obsd. between single fluorophores were consistent with the premise of FRET. On excitation at the donor, the fluorescence of the donor decreased and the fluorescence of the acceptor increased. Photobleaching of one of the fluorophore affected the fluorescence of the other as predicted by the mechanism of FRET. Photobleaching occurred in a single step, confirming that the donor and acceptor fluorophores were single. Large FRET efficiency (78%) was obtained in agreement with a coiled-coil structure and the FRET decreased when the protein was denatured into two polypeptide chains. Thus, we demonstrated that it is possible to detect the assembly-disassembly of individual protein mols. as well as conformational changes occurring within a single protein mol.
IT **146368-14-1D**, conjugates with .alpha.-tropomyosin
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)
(Cy5; fluorescence resonance energy transfer between single fluorophores attached to coiled-coil protein in aq. soln.)
RN 146368-14-1 HCAPLUS
CN 3H-Indolium, 2-[5-[1-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1,3-pentadienyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)

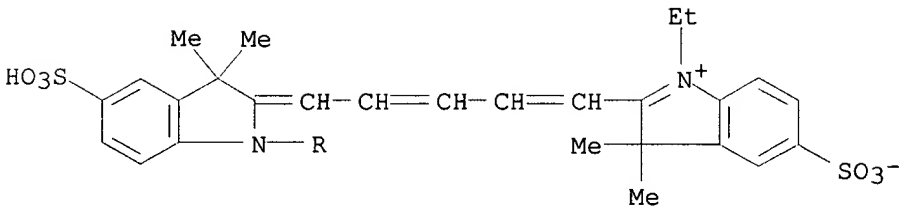


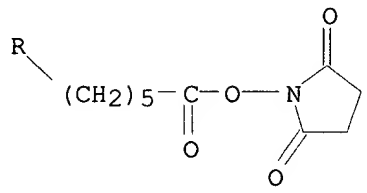


RE.CNT 36
RE
(1) Betzig, E; Science 1993, V262, P1422 HCAPLUS
(3) Bukau, B; Cell 1998, V92, P351 HCAPLUS
(5) Cummins, P; Biochem J 1974, V141, P43 HCAPLUS
(6) Dickson, R; Nature (London) 1997, V388, P355 HCAPLUS
(7) Dos Remedios, C; J Struct Biol 1995, V115, P175 HCAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d bib abs hitstr 21

L55 ANSWER 21 OF 37 HCAPLUS COPYRIGHT 2000 ACS
AN 1999:455955 HCAPLUS
DN 131:212758
TI A homogeneous and multiplexed immunoassay for **high-throughput** screening using fluorometric microvolume assay technology
AU Swartzman, Elana E.; Miraglia, Sheri J.; Mellentin-Michelotti, Julia; Evangelista, Lolita; Yuan, Pau-Miau
CS PE Biosystems, Foster City, CA, 94404-1128, USA
SO Anal. Biochem. (1999), 271(2), 143-151
CODEN: ANBCA2; ISSN: 0003-2697
PB Academic Press
DT Journal
LA English
AB The authors have developed a simple, homogeneous bead-based immunoassay for use with fluorometric micro-vol. assay technol. (FMAT). The FLISA (fluorescence-linked immunosorbent assay) can be easily adapted from existing immunoassays, is comparable to traditional ELISAs with respect to linear dynamic range and sensitivity, and can be readily performed in 96- and 384-well plates. Addnl., the FLISA utilizes 100-fold less primary antibody than the conventional immunoassay. The scanner uses a helium/neon laser to image and measure bead-bound fluorescence while the background fluorescence is ignored. Consequently, no wash steps are required to remove unbound antibody, ligand, and fluorophore. Furthermore, the instrument is capable of detecting two different fluorescent dyes, allowing for multiplexed assays based on color. Fluorescent bead-based immunoassays were developed for the cytokines IL-6 and IL-8, and their use in both one-color and two-color FLISAs is demonstrated. Although no wash steps were employed, the FLISA was able to accurately measure the concns. of IL-6 and IL-8 in the growth media of cytokine-stimulated HUVEC cells. In addn., a simulated **high-throughput** two-color FLISA pos. identified those wells in a 384-well plate that contained different amts. of IL-6 and/or IL-8 peptide.
The homogeneous, multiplex and multiplate format of the FLISA reduces hands-on time and reagent usage, and is therefore ideally suited for **high-throughput** screening. (c) 1999 Academic Press.
IT **146368-14-1D**, antibody or streptavidin conjugates
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(for fluorescence-linked immunosorbent assay detection of biomols.)
RN 146368-14-1 HCAPLUS
CN 3H-Indolium, 2-[5-[1-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1,3-pentadienyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)





RE.CNT 11
RE
(1) Broach, J; Nature 1996, V384, P14 HCAPLUS
(2) Chen, C; Cytokine 1996, V8, P58 HCAPLUS
(7) McHugh, T; Methods Cell Biol 1994, V42, P575 HCAPLUS
(10) Pober, J; Physiol Rev 1990, V70, P427 HCAPLUS
(11) Udenfriend, S; Anal Biochem 1987, V161, P494 HCAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d bib abs hitstr 22

L55 ANSWER 22 OF 37 HCAPLUS COPYRIGHT 2000 ACS
AN 1999:454271 HCAPLUS
DN 131:83965
TI Solid phase selection of differentially expressed genes by competitive hybridization with reference DNA cloned on microparticles
IN Albrecht, Glen; Brenner, Sydney; Dubridge, Robert
PA Lynx Therapeutics, Inc., USA
SO PCT Int. Appl., 108 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

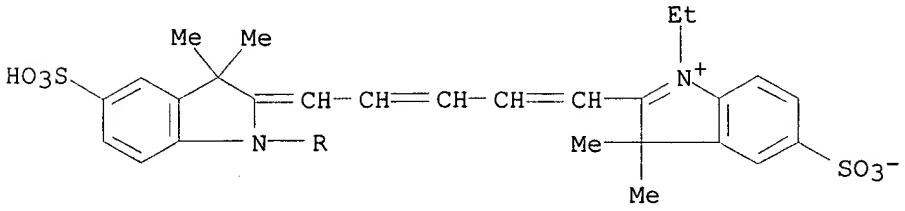
| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | WO 9935293 | A2 | 19990715 | WO 1999-US666 | 19990108 |
| | WO 9935293 | A3 | 19990930 | | |
| | W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| | RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |
| | AU 9921139 | A1 | 19990726 | AU 1999-21139 | 19990108 |
| PRAI | US 1998-5222 | 19980109 | | | |
| | US 1998-130446 | 19980806 | | | |
| | WO 1999-US666 | 19990108 | | | |

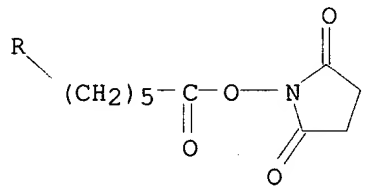
AB The invention provides a method and materials for monitoring and isolating differentially expressed genes. In accordance with the method of the invention, differently labeled populations of DNAs from sources to be compared are competitively hybridized with ref. DNA cloned on solid phase supports, e.g. microparticles, to provide a differential expression **library** which, in the preferred embodiment, may be manipulated by fluorescence-activated cell sorting (FACS). Monitoring the relative signal intensity of the different fluorescent labels on the microparticles permits quant. anal. of expression levels relative to the ref. DNA. The invention also provides a method for identifying and isolating rare genes.

Populations of microparticles having relative signal intensities of interest can be isolated by FACS and the attached DNAs identified by sequencing, such as with massively parallel signature sequencing (MPSS), or with conventional DNA sequencing protocols.

IT **146368-14-1**
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(Cy5; solid phase selection of differentially expressed genes by competitive hybridization with ref. DNA cloned on microparticles)
RN 146368-14-1 HCAPLUS
CN 3H-Indolium, 2-[5-[1-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1,3-pentadienyl]-1-ethyl-

3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)



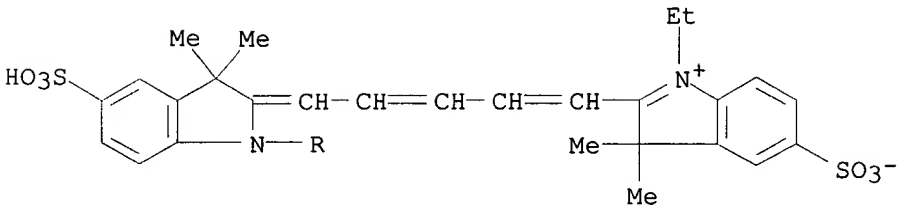


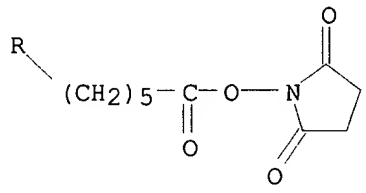
=> d bib abs hitstr 23

L55 ANSWER 23 OF 37 HCAPLUS COPYRIGHT 2000 ACS
AN 1999:440085 HCAPLUS
DN 131:85143
TI Confocal fluorescence coincidence analysis for following various reactions
and conformation changes
IN Eigen, Manfred; Winkler, Thorsten; Stephan, Jens; Schwille, Petra; Koltermann, Andre; Kettling, Ulrich; Doerre, Klaus; Bieschke, Jan
PA EVOTEC BioSystems A.-G, Germany
SO Ger. Offen., 12 pp.
CODEN: GWXXBX
DT Patent
LA German
FAN.CNT 2

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | DE 19757740 | A1 | 19990708 | DE 1997-19757740 | 19971223 |
| | DE 19757740 | C2 | 20000413 | | |
| | WO 9934195 | A1 | 19990708 | WO 1998-EP8425 | 19981223 |
| | W: JP, US | | | | |
| | RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE | | | | |
| | EP 1042664 | A1 | 20001011 | EP 1998-965868 | 19981223 |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI | | | | |

PRAI DE 1997-19757740 19971223
DE 1998-19849265 19981026
WO 1998-EP8425 19981223
AB The invention concerns a math. method, the coincidence anal. in conjunction with dual-color fluoroscence correlation spectroscopy for measuring assocn., dissocn., ligation, cleavage, enzyme reactions and conformational changes in picoliter vols. and in fragments of a second or in seconds; the method is designed for **high-throughput** screening. Probes are labeled with two different fluorescent dyes and radiated with laser light at two different wavelengths. Fluorescence fluctuations occur coincidently in two different spectral ranges; occurrence of reactions are monitored as a function of concn. and time. Thus a homogeneous restriction endonuclease assays were performed using double labeled double stranded DNA; the DNA contained recognition sites for BamHI, EcoRI, Sspl, and HindIII.
IT **146368-14-1**
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(fluorophor label for oligonucleotide; confocal fluorescence coincidence anal. for following various reactions and conformation changes)
RN 146368-14-1 HCAPLUS
CN 3H-Indolium, 2-[5-[1-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1,3-pentadienyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)





RE.CNT 2

RE

(1) Anon; EP 0731173 A2 HCAPLUS

(2) Anon; WO 9416313 A2

=> d bib abs hitstr 24

L55 ANSWER 24 OF 37 HCAPLUS COPYRIGHT 2000 ACS
AN 1999:405112 HCAPLUS
DN 131:56155
TI Methods for the simultaneous identification of novel biological targets and lead structures for drug development using **combinatorial libraries** and probes
IN Heefner, Donald L.; Zepp, Charles M.; Gao, Yun; Jones, Steven W.
PA Sepracor Inc., USA
SO PCT Int. Appl., 125 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 2

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | WO 9931267 | A1 | 19990624 | WO 1998-US26894 | 19981218 |
| | W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| | RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |
| | AU 9919256 | A1 | 19990705 | AU 1999-19256 | 19981218 |
| PRAI | US 1997-68035 | 19971218 | | | |
| | WO 1998-US26894 | 19981218 | | | |

AB The **combinatorial** screening assays and detection methods of the present invention encompass highly diversified **libraries** of compds. which act as fingerprints to allow for the identification of specific mol. differences existing between biol. samples. The **combinatorial** screening assay and detection methods of the present invention utilize highly diversified **libraries** of compds. to interrogate and characterize complex mixts. in order to identify specific mol. differences existing between biol. samples, which may serve as targets for diagnosis of development of therapeutics. The invention is base, in part, on the design of sensitive, rapid, homogeneous assay systems that permit the evaluation, interrogation, and characterization of samples using complex, highly diversified **libraries** of mol. probes. The ability to run the **high throughput** assays in a homogeneous format increases sensitivity of screening. In addn., the homogeneous format allows the mols. which interact to maintain their native or active conformations. Moreover, the homogeneous assay systems of the invention utilize robust detection systems that do not require sepn. steps for detection of reaction products. The assays of the invention can be used for diagnostics, drug screening and discovery, target-driven discover, and in the field of proteomics and genomics for the identification of disease markers and drug targets.

IT **216572-00-8**, BODIPY FL-X ryanodine
RL: ARG (Analytical reagent use); ARU (Analytical role, unclassified);

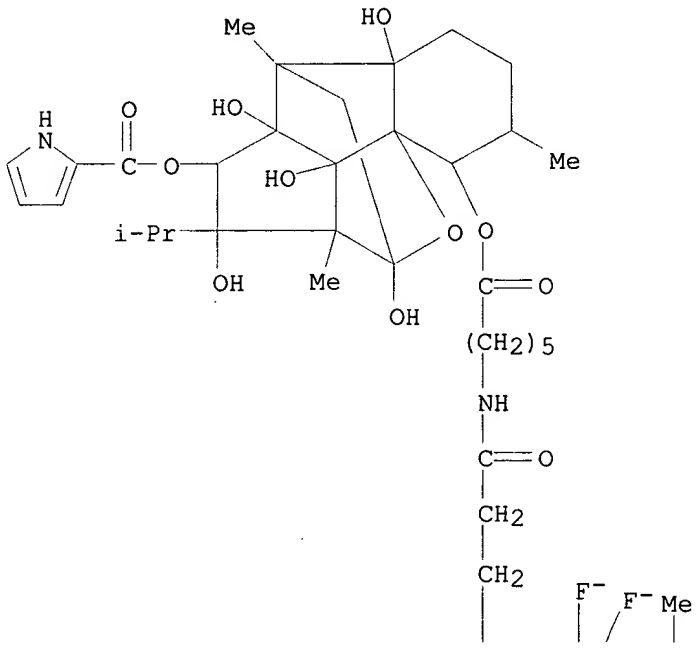
BPR Searched by John Dantzman 703-308-4488

(Biological process); THU (Therapeutic use); ANST (Analytical study); BIOL
(Biological study); PROC (Process); USES (Uses)
(identification of novel biol. targets and lead structures for drug development using **combinatorial libraries** and probes)

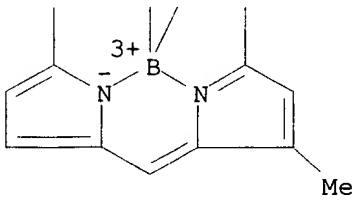
RN 216572-00-8 HCAPLUS

CN Boron, [(3S,4R,4aR,6S,6aS,7S,8R,8aS,8bR,9S,9aS)-4-[[6-[[3-[5-[(3,5-dimethyl-2H-pyrrol-2-ylidene-.kappa.N)methyl]-1H-pyrrol-2-yl-.kappa.N]-1-oxopropyl]amino]-1-oxohexyl]oxy]dodecahydro-6,7,8a,8b,9a-pentahydroxy-3,6a,9-trimethyl-7-(1-methylethyl)-6,9-methanobenzo[1,2]pentaleno[1,6-bc]furan-8-yl 1H-pyrrole-2-carboxylato]difluoro-, (T-4)- (9CI) (CA INDEX NAME)

PAGE 1-A




PAGE 2-A



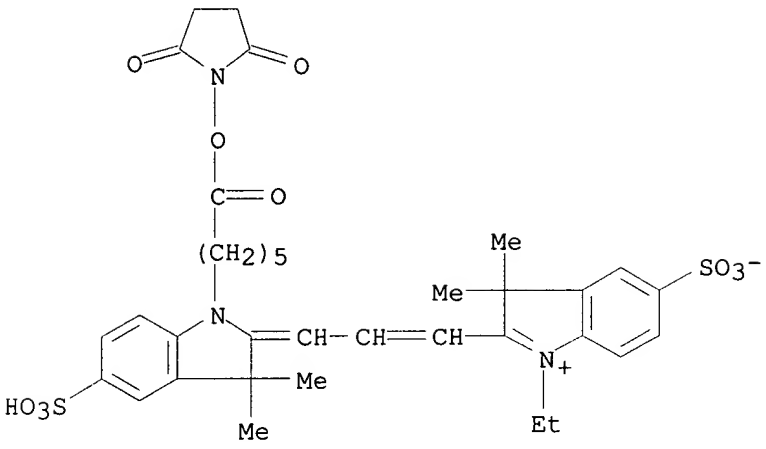

RE.CNT 1
RE

Searched by John Dantzman 703-308-4488

(1) Lin; Science 1997, V278, P840 HCAPLUS

=> d bib abs hitstr 25

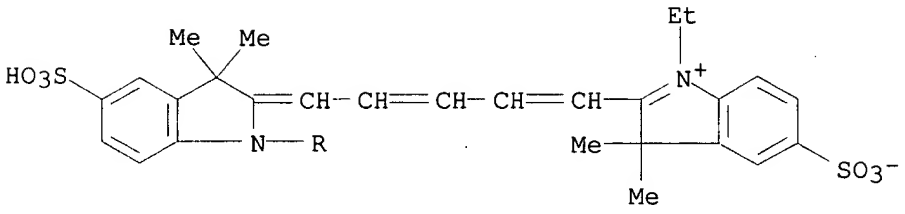
L55 ANSWER 25 OF 37 HCAPLUS COPYRIGHT 2000 ACS
AN 1999:371996 HCAPLUS
DN 131:180376
TI Embryonic gene expression resolved at the cellular level by fluorescence in situ hybridization
AU Paratore, Christian; Suter, Ueli; Sommer, Lukas
CS Institute of Cell Biology, Swiss Federal Institute of Technology, ETH-Honggerberg, Zurich, CH-8093, Switz.
SO Histochem. Cell Biol. (1999), 111(6), 435-443
CODEN: HCBIFP; ISSN: 0948-6143
PB Springer-Verlag
DT Journal
LA English
AB Tyramide signal amplification has successfully been applied to enhance detection limits of both immunol. reactions and in situ hybridization methods. The technique uses short-range deposition of activated tyramide mediated by horseradish peroxidase. The authors have adapted this method to fluorescence in situ hybridization on embryonic tissue sections using fluorophore-labeled tyramide. The sensitivity of the procedure was sufficient to analyze the embryonic expression of mRNAs encoding both transcription factors and structural proteins. **Combining** fluorescence in situ hybridization and immunofluorescence with confocal microscopy allows the simultaneous detection of distinct mRNA species or of mRNAs together with proteins on the cellular level. Thus, the cell types expressing a particular gene at a given developmental stage can be studied even if no antibody to the gene product of interest is available. Moreover, the technique allows to study in situ the **combinatorial** marker expression that characterizes progenitor stages of a given cell lineage.
IT **146368-16-3D**, tyramide derivs
RL: ARG (Analytical reagent use); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(fluorescent reporter as substrates; embryonic gene expression resolved
at cellular level by fluorescence in situ hybridization)
RN 146368-16-3 HCAPLUS
CN 3H-Indolium, 2-[3-[1-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1-propenyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)

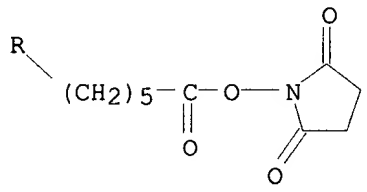


RE.CNT 26
RE
(1) Adams, J; J Histochem Cytochem 1992, V40, P1457 HCAPLUS
(2) Birren, S; Development 1993, V119, P597 HCAPLUS
(3) Bobrow, M; J Immunol Methods 1989, V125, P279 HCAPLUS
(4) Chotteau-Lelievre, A; Oncogene 1997, V15, P937 HCAPLUS
(6) Hunyady, B; J Histochem Cytochem 1996, V44, P1353 HCAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d bib abs hitstr 26

L55 ANSWER 26 OF 37 HCAPLUS COPYRIGHT 2000 ACS
AN 1999:371551 HCAPLUS
DN 131:153816
TI Study of Ligand-Receptor Interactions by Fluorescence Correlation Spectroscopy with Different Fluorophores: Evidence That the Homopentameric 5-Hydroxytryptamine Type 3As Receptor Binds Only One Ligand
AU Wohland, T.; Friedrich, K.; Hovius, R.; Vogel, H.
CS Laboratory of Physical Chemistry of Polymers and Membranes Chemistry Department, Swiss Federal Institute of Technology, Lausanne, CH-1015, Switz.
SO Biochemistry (1999), 38(27), 8671-8681
CODEN: BICHAW; ISSN: 0006-2960
PB American Chemical Society
DT Journal
LA English
AB The 5-hydroxytryptamine receptor of type 3 was investigated by fluorescence correlation spectroscopy (FCS). Binding consts. of fluorescently labeled ligands, the stoichiometry, and the mass of the receptor are readily accessible by this technique, while the duration of measurement is on the order of seconds to minutes. The receptor antagonist 1,2,3,9-tetrahydro-3-[(5-methyl-1H-imidazol-4-yl)methyl]-9-(3-aminopropyl)-4H-carbazol-4-one (GR-H) was labeled with the fluorophores rhodamine 6G, fluorescein, N-[7-nitrobenz-2-oxa-1,3-diazol-4-yl], and the cyanine dye Cy5. These labels cover a large part of the visible electromagnetic spectrum. It is shown that the photophys. and chem. properties have a direct influence on the measurement quality (duration of measurement, signal-to-noise ratio) and the ligand-receptor interactions (dissocn. consts.), resp. This makes it necessary to choose a suitable label or a **combination** of labels for receptor studies. The affinities of the fluorescently labeled ligands detd. by FCS were virtually identical to the values obtained by radioligand binding expts. Moreover, the dissocn. const. of a nonfluorescent receptor ligand was detd. successfully by an FCS competition assay. The exptl. results showed that only one antagonist binds to the receptor, in agreement with measurements previously published [Tairi et al. (1998) Biochem. 37, 15850-15864].
IT **146368-14-1**, Cy5
RL: BPR (Biological process); BUU (Biological use, unclassified); BIOL (Biological study); PROC (Process); USES (Uses)
(Cy5; fluorescence correlation spectroscopy with different fluorophores shows that homopentameric 5-hydroxytryptamine type 3As receptor binds only one ligand)
RN 146368-14-1 HCAPLUS
CN 3H-Indolium, 2-[5-[1-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1,3-pentadienyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)

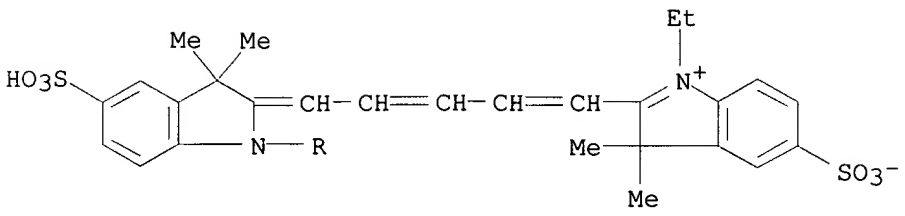


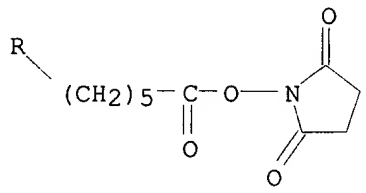


RE.CNT 43
RE
(1) Aragon, S; J Chem Phys 1976, V64, P1791 HCAPLUS
(3) Boess, F; J Neurochem 1995, V64, P1401 HCAPLUS
(4) Bonnet, G; Proc Natl Acad Sci USA 1998, V95, P8602 HCAPLUS
(6) Cheng, Y; Biochem Pharmacol 1973, V22, P3099 HCAPLUS
(7) Clegg, R; Progress in Protein-Lipid Interactions 1985, P173 HCAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d bib abs hitstr 27

L55 ANSWER 27 OF 37 HCAPLUS COPYRIGHT 2000 ACS
AN 1999:365061 HCAPLUS
DN 131:151371
TI Comparison between a conventional epifluorescence microscope and a new highly efficient evanescent wave detector in single-molecule spectroscopic applications
AU Enderlein, Joerg; Ruckstuhl, Thomas; Loescher, Frank; Boehmer, Martin; Seeger, Stefan
CS Inst.Analytical Chemistry, Chemo- und Biosensors, Univ. Regensburg, Germany
SO Proc. SPIE-Int. Soc. Opt. Eng. (1999), 3602(Advances in Fluorescence Sensing Technology IV), 94-101
CODEN: PSISDG; ISSN: 0277-786X
PB SPIE-The International Society for Optical Engineering
DT Journal
LA English
AB We present a comparison between two different optical detection systems: a confocal epifluorescence microscope, and a new evanescent wave detection system employing a parabolic optical element. In a microscope set-up, fluorescence light is **collected** within a cone around the optical axis, whereas in the evanescent light detector, fluorescence light is **collected** mainly at angles larger than the so-called crit. angle of total internal reflection. Based on a thorough theor. modeling of both exptl. set-ups, comparison between the two detection systems is made and the optical detection efficiency is compared.
IT **146368-14-1**, Cy5
RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process)
(single-mol. detection using evanescent wave detector)
RN 146368-14-1 HCAPLUS
CN 3H-Indolium, 2-[5-[1-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1,3-pentadienyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)

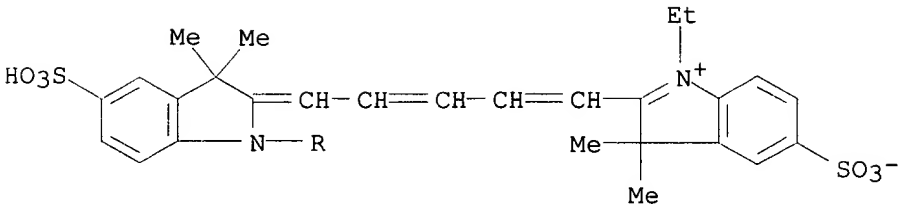


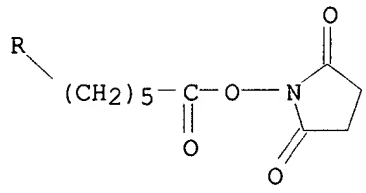


RE.CNT 5
RE
(1) Chance, R; Advances in chemical physics 1978, P1 HCAPLUS
(2) Enderlein, J; to be published in Appl Opt
(3) Huston, A; Chem Phys 1991, V149, P401 HCAPLUS
(4) Lieberherr, M; Surface Science 1987, V189/190, P954
(5) Lukosz, W; J Opt Soc Am 1977, V67, P1607

=> d bib abs hitstr 28

L55 ANSWER 28 OF 37 HCAPLUS COPYRIGHT 2000 ACS
AN 1999:276701 HCAPLUS
DN 131:126014
TI New strategy for multi-color fluorescence in situ hybridization: COBRA: **Combined** Binary RAtio labelling
AU Tanke, H. J.; Wiegant, J.; Van Gijlswijk, R. P. M.; Bezrookove, V.; Pattenier, H.; Heetebrij, R. J.; Talman, E. G.; Raap, A. K.; Vrolijk, J.
CS Laboratory for Cytochemistry and Cytometry, Department of Molecular Cell Biology, Leiden University Medical Center, Leiden, 2333, Neth.
SO Eur. J. Hum. Genet. (1999), 7(1), 2-11
CODEN: EJHGEU; ISSN: 1018-4813
PB Stockton Press
DT Journal
LA English
AB Multicolor in situ hybridization (MFISH) is increasingly applied to karyotyping and detection of chromosomal abnormalities. So far 27 color analyses have been described using fluorescently labeled chromosome painting probes in a so-called **combinatorial** approach. In this paper a new strategy is presented to use efficiently the currently available no. of spectrally sepd. fluorophores in order to increase the multiplicity of MFISH. We introduce the principle of COBRA ( **COmbined** Binary RAtio labeling), which is based on the simultaneous use of **combinatorial** labeling and ratio labeling. Human chromosome painting in 24 colors is accomplished using four fluorophores only. Three fluorophores are used pair wise for ratio labeling of a set of 12 chromosome painting probes. The second set of 12 probes is labeled identically but is also given a binary label (fourth fluorophore). The COBRA method is demonstrated on normal human chromosomes and on a lymphoma (JVM) cell line, using probes enzymically labeled with fluorescein, lissamine and cy5 as primary fluorophores, and diethylaminocoumarin (DEAC), a blue dye, as **combinatorial** fourth label to demonstrate incorporated digoxigenin. In addn., the principle was tested using chem. labeling. The first set of 12 painting probes was therefore labeled by ULS (Universal Linkage System), using DEAC, cy3 and cy5 as primary labels, and the second set was labeled similarly, but also contained a digoxigenin-ULS label, which was indirectly stained with fluorescein. Subsequently, a math. anal. is presented and methods are indicated for achieving an MFISH multiplicity of 48, 96 or even higher using existing technol.
IT **146368-14-1D**, probes labeled with
RL: ARG (Analytical reagent use); PEP (Physical, engineering or chemical process); ANST (Analytical study); PROC (Process); USES (Uses)
(CY5; new COBRA (**Combined** Binary RAtio labeling) strategy for multi-color fluorescence in situ hybridization)
RN 146368-14-1 HCAPLUS
CN 3H-Indolium, 2-[5-[1-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1,3-pentadienyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)

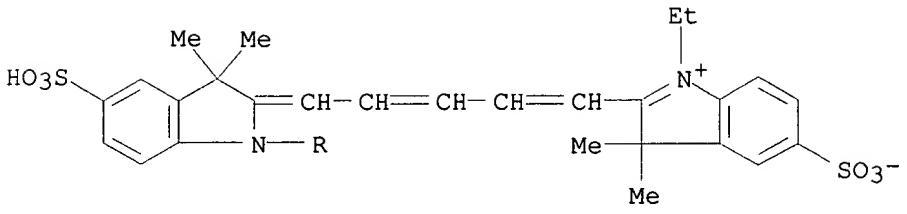


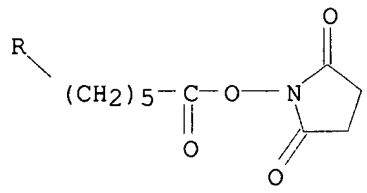


RE.CNT 17
RE
(1) Dauwerse, J; Hum Mol Genet 1992, V1, P593 HCAPLUS
(2) Lengauer, C; Hum Mol Genet 1993, V2, P505 HCAPLUS
(3) Melo, J; Int J Cancer 1986, V38, P531 HCAPLUS
(4) Morrison, L; Cytometry 1997, V27, P314 HCAPLUS
(6) Nederlof, P; Cytometry 1990, V11, P126 HCAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d bib abs hitstr 29

L55 ANSWER 29 OF 37 HCAPLUS COPYRIGHT 2000 ACS
AN 1999:155616 HCAPLUS
DN 131:2342
TI Time-resolved detection and identification of single analyte molecules in microcapillaries by time-correlated single-photon counting (TCSPC)
AU Becker, W.; Hickl, H.; Zander, C.; Drexhage, K. H.; Sauer, M.; Siebert, S.; Wolfrum, J.
CS Becker & Hickl GmbH, Kolonnenstr. 29, Berlin, 10829, Germany
SO Rev. Sci. Instrum. (1999), 70(3), 1835-1841
CODEN: RSINAK; ISSN: 0034-6748
PB American Institute of Physics
DT Journal
LA English
AB A PC plug-in card for online time resolved fluorescence detection of single dye mols. based on a new time-correlated single photon counting (TCSPC) module is described. The module contains all electronic components const. fraction discriminators (CFDs), time-to-amplitude converter (TAC), analog-to-digital converter (ADC), multichannel analyzer (MCA timers) on board required for TCSPC. A fast TAC design in **combination** with a fast flash ADC and an error-correcting ADC/MCA principle results in a max. count rate of 8 MHz (dead time 125 ns). A dual memory architecture allows for unlimited recording of decay curves with **collection** times down to 150 .mu.s without time gaps between subsequent recordings. Applying a short-pulse diode laser emitting at 640 nm with a repetition rate of 60 MHz in **combination** with a confocal microscope, we studied bursts of fluorescence photons from individual dye labeled mononucleotide mols. (Cy5-dCTP) in a cone shaped microcapillary with an inner diam. of 0.5 .mu.m at the end of the tip. The flow of the conjugates was controlled by electrokinetic forces. The presented technique permits the counting and identification of all labeled analyte mols. present in a given sample due to their characteristic velocities, burst sizes, and fluorescence decay times.
IT **146368-14-1D**, Cy5, reaction product with dCTP
RL: ANT (Analyte); ANST (Analytical study)
(Cy5; time-resolved detection and identification of single analyte mols. in microcapillaries by time-correlated single-photon counting (TCSPC))
RN 146368-14-1 HCAPLUS
CN 3H-Indolium, 2-[5-[1-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1,3-pentadienyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)

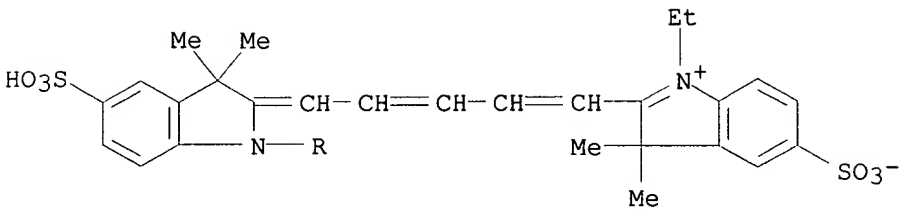


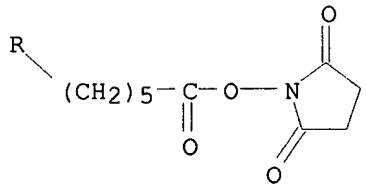


RE.CNT 26
RE
(2) Castro, A; Appl Opt 1995, V34, P3218 HCAPLUS
(3) Dorre, K; Bioimaging 1997, V5, P139 HCAPLUS
(4) Dovichi, N; Proc SPIE 1983, V426, P71 HCAPLUS
(5) Edman, L; Proc Natl Acad Sci USA 1996, V93, P6710 HCAPLUS
(6) Eggeling, C; Proc Natl Acad Sci USA 1998, V95, P1556 HCAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d bib abs hitstr 30

L55 ANSWER 30 OF 37 HCAPLUS COPYRIGHT 2000 ACS
AN 1999:150877 HCAPLUS
DN 130:308630
TI Confocal fluorescence coincidence analysis: an approach to ultra **high-throughput** screening
AU Winkler, Thorsten; Kettling, Ulrich; Koltermann, Andre; Eigen, Manfred
CS Department of Biochemical Kinetics, Max Planck Institute for Biophysical Chemistry, Gottingen, D-37077, Germany
SO Proc. Natl. Acad. Sci. U. S. A. (1999), 96(4), 1375-1378
CODEN: PNASA6; ISSN: 0027-8424
PB National Academy of Sciences
DT Journal
LA English
AB Fluorescence-based assay technologies play an increasing role in **high-throughput** screening. They can be classified into different categories: fluorescence polarization, time-resolved fluorescence, fluorescence resonance energy transfer, and fluorescence correlation spectroscopy. In this work we present an alternative anal. technique for **high-throughput** screening, which we call confocal fluorescence coincidence anal. Confocal fluorescence coincidence anal. exts. fluorescence fluctuations that occur coincidently in two different spectral ranges from a tiny observation vol. of below 1 fl. This procedure makes it possible to monitor whether an assocn. between mol. fragments that are labeled with different fluorophores is established or broken. Therefore, it provides access to the characterization of a variety of cleavage and ligation reactions in biochem. Confocal fluorescence coincidence anal. is a very sensitive and ultrafast technique with readout times of 100 ms and below. This feature is demonstrated by means of a homogeneous assay for restriction endonuclease EcoRI. The presented achievements break ground for **throughput** rates as **high** as 106 samples per day with using only small amts. of sample substance and therefore constitute a solid base for screening applications in drug discovery and evolutionary biotechnol.
IT **146368-14-1**, Cy5
RL: ARG (Analytical reagent use); PRP (Properties); ANST (Analytical study); USES (Uses)
(CY 5, fluorophor label for oligonucleotide; confocal fluorescence coincidence anal. as an approach to ultra **high-throughput** screening)
RN 146368-14-1 HCAPLUS
CN 3H-Indolium, 2-[5-[1-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1,3-pentadienyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)





RE.CNT 10
RE
(1) Auer, M; Drug Discovery Today 1998, V3, P457 HCAPLUS
(2) Eigen, M; Proc Natl Acad Sci USA 1994, V91, P5740 HCAPLUS
(3) Kettling, U; Proc Natl Acad Sci USA 1998, V95, P1416 HCAPLUS
(4) Koltermann, A; Proc Natl Acad Sci USA 1998, V95, P1421 HCAPLUS
(5) Magde, D; Biopolymers 1974, V13, P29 HCAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d bib abs hitstr 31

L55 ANSWER 31 OF 37 HCAPLUS COPYRIGHT 2000 ACS
AN 1999:25972 HCAPLUS
DN 130:92475
TI Use of nucleic acid ligands in flow cytometry
IN Davis, Ken; Jayasena, Sumedha; Gold, Larry
PA Nexstar Pharmaceuticals, Inc., USA
SO U.S., 16 pp., Cont.-in-part of U.S. 5,496,938.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 89

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | US 5853984 | A | 19981229 | US 1995-479729 | 19950607 |
| | US 5475096 | A | 19951212 | US 1991-714131 | 19910610 |
| | EP 786469 | A2 | 19970730 | EP 1997-200035 | 19910610 |
| | EP 786469 | A3 | 19970806 | | |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE | | | | |
| | IL 112141 | A1 | 19980405 | IL 1991-112141 | 19910611 |
| | US 5496938 | A | 19960305 | US 1992-964624 | 19921021 |
| | US 5472841 | A | 19951205 | US 1994-199507 | 19940222 |
| | US 5683867 | A | 19971104 | US 1994-234997 | 19940428 |
| | WO 9641019 | A1 | 19961219 | WO 1996-US8089 | 19960530 |
| | W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI | | | | |
| | RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML | | | | |
| | AU 9661470 | A1 | 19961230 | AU 1996-61470 | 19960530 |
| | EP 832299 | A1 | 19980401 | EP 1996-919017 | 19960530 |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI | | | | |

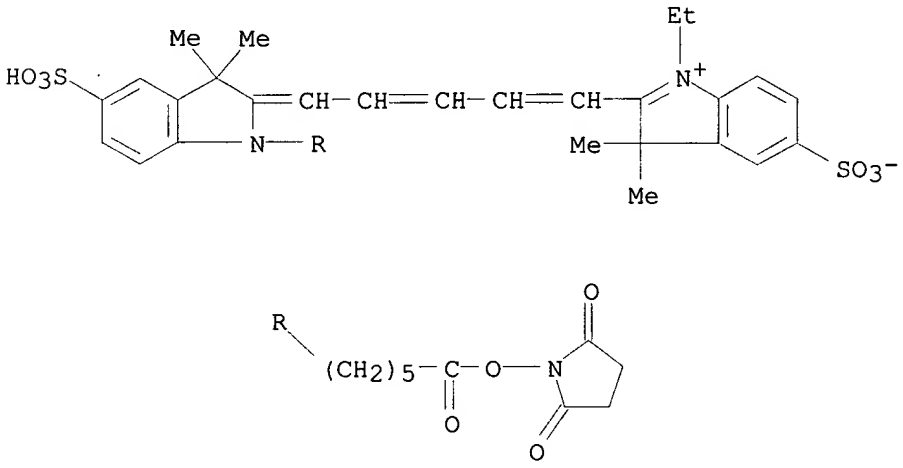
PRAI US 1990-536428 19900611
US 1991-714131 19910610
US 1992-964624 19921021
US 1994-199507 19940222
US 1994-234997 19940428
EP 1991-912753 19910610
IL 1991-98456 19910611
US 1993-117991 19930908
US 1993-123935 19930917
US 1994-234797 19940428
US 1995-479729 19950607
WO 1996-US8089 19960530

AB This invention describes methods for using nucleic acid ligands in flow cytometry applications. A nucleic acid ligand is a non-naturally occurring nucleic acid having a specific binding affinity for a target. A nucleic acid ligand can be directed to any target in any format that is suitable for use in flow cytometry. In a preferred embodiment, the nucleic acid ligands bind cell surface proteins with high affinity and specificity. In another embodiment, the nucleic acid ligands bind

intracellular proteins. In yet another embodiment, the nucleic acid ligands bind to targets in a substance which has been coated on a solid support, such as a bead. The method utilized here for identifying and prepg. said nucleic acid ligands is called SELEX, an acronym for Systematic Evolution of Ligands by Exponential enrichment. The invention includes high-affinity nucleic acid ligands having attached one or more fluorophore mols. which may be employed in flow cytometric methodologies.

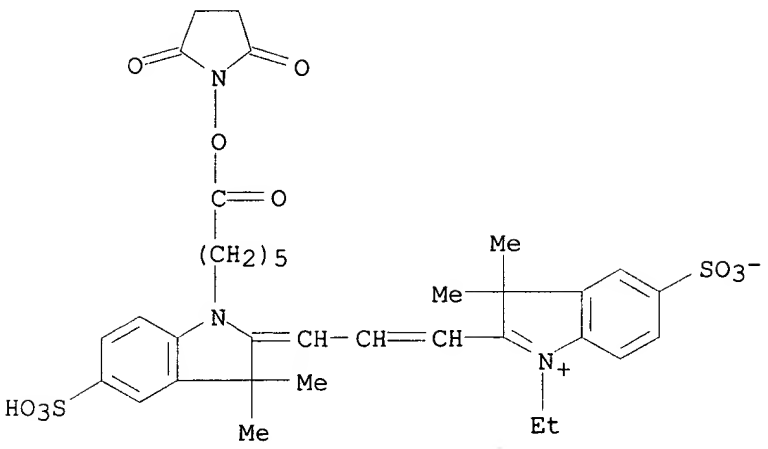
IT **146368-14-1 146368-16-3**
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(use of nucleic acid ligands in flow cytometry)

RN 146368-14-1 HCAPLUS
CN 3H-Indolium, 2-[5-[1-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1,3-pentadienyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)





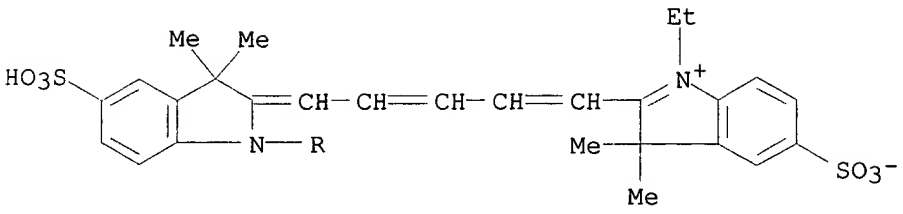
RN 146368-16-3 HCAPLUS
CN 3H-Indolium, 2-[3-[1-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1-propenyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)

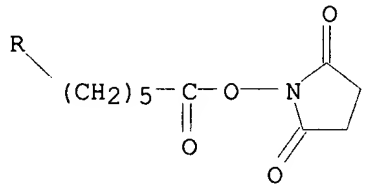


RE.CNT 25
RE
(2) Anon; WO 8906694 1989 HCAPLUS
(3) Anon; WO 9214843 1992 HCAPLUS
(4) Anon; WO 9305182 1993 HCAPLUS
(5) Anon; WO 9401448 1994 HCAPLUS
(6) Chihara; Eur Cytokine Network 1992, V3, P53 HCAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d bib abs hitstr 32

L55 ANSWER 32 OF 37 HCAPLUS COPYRIGHT 2000 ACS
AN 1998:815708 HCAPLUS
DN 130:178689
TI New ways in bioanalysis-one-way optical sensor chip for environmental analysis
AU Meusel, Markus; Trau, Dieter; Katerkamp, Andreas; Meier, Frank; Polzius, Rainer; Cammann, Karl
CS ICB, Institut fur Chemo- und Biosensorik, Munster, D-48149, Germany
SO Sens. Actuators, B (1998), B51(1-3), 249-255
CODEN: SABCEB; ISSN: 0925-4005
PB Elsevier Science S.A.
DT Journal
LA English
AB An optical immunosensor system consisting of a disposable low-cost sensor chip including a fluidic system and a base unit for optical readout, was developed. Near IR (NIR)-fluorescence markers (Cy5) were excited by an evanescent wave generated on the surface of the sensor chip. The **combination** of both fluorescence measurements and evanescent wave excitation provides extremely sensitive detection and avoids any washing or sepn. steps. To demonstrate the feasibility of the system for environmental control, assays for the detn. of 2,4-D were developed. Two different assay formats were applied to det. 2,4-D in the relevant concn. range. Due to the assay formats chosen, a direct proportional relationship between analyte concn. and signal intensity was achieved. Within an assay time of 15 min only, the analyte 2,4-D could be detd. in a linear concn. range covering 3 orders of magnitude.
IT **146368-14-1**, Cy5
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(Cy5; detn. of 2,4-D using an optical immunosensor system comprising a disposable sensor chip)
RN 146368-14-1 HCAPLUS
CN 3H-Indolium, 2-[5-[1-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1,3-pentadienyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)





RE.CNT 18
RE
(1) Bauer, C; Anal Chem 1996, V68, P2453 HCAPLUS
(2) Dean, P; Steroids 18 1971, P593 HCAPLUS
(3) Dzantiev, B; Biosens Bioelectron 1996, V11, P179 HCAPLUS
(5) Johnson, W; Anal Chem 1991, V63, P1510 HCAPLUS
(6) Kalab, T; Anal Chim Acta 1995, V304, P361 HCAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d bib abs hitstr 33

L55 ANSWER 33 OF 37 HCAPLUS COPYRIGHT 2000 ACS
AN 1998:806855 HCAPLUS
DN 130:47463
TI **High-throughput** assay for enzyme inhibitors and receptor- and target-binding ligands
IN Burbaum, Jonathan J.; Chung, Thomas D. Y.; Kirk, Gregory L.; Inglese, James; Chelsky, Daniel
PA Pharmacopeia, Inc., USA
SO PCT Int. Appl., 37 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

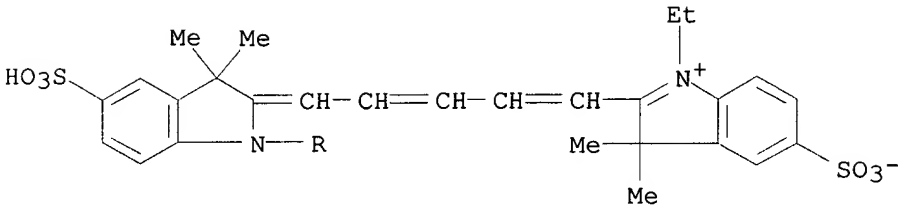
| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| PI WO 9855866 | A1 | 19981210 | WO 1998-US11749 | 19980601 |
| W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG | | | | |
| US 5876946 | A | 19990302 | US 1997-868280 | 19970603 |
| AU 9879551 | A1 | 19981221 | AU 1998-79551 | 19980601 |
| EP 1002233 | A1 | 20000524 | EP 1998-930081 | 19980601 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI | | | | |

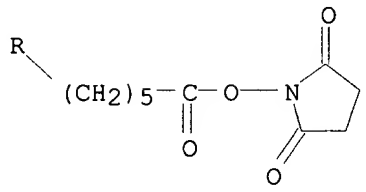
PRAI US 1997-868280 19970603
WO 1998-US11749 19980601

AB A homogeneous **high-throughput** assay is described which screens compds. for enzyme inhibition, or receptor or other target binding. Inhibition (or binding) by the **library** compds. causes a change in the amt. of an optically detectable label that is bound to suspendable cells or solid supports. The amts. of label bound to individual cells or solid supports are microscopically detd., and compared with the amt. of label that is not bound to individual cells or solid supports. The degree of inhibition or binding is detd. using this data. Confocal microscopy, and subsequent data anal., allow the assay to be carried out without any sepn. step, and provide for **high throughput** screening of very small assay vols. using very small amts. of test compd.

IT **146368-14-1D**, Cy5, conjugates with neurokinin A and IL-8
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(Cy5; **high-throughput** assay for enzyme inhibitors and receptor- and target-binding ligands)

RN 146368-14-1 HCAPLUS
CN 3H-Indolium, 2-[5-[1-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1,3-pentadienyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)

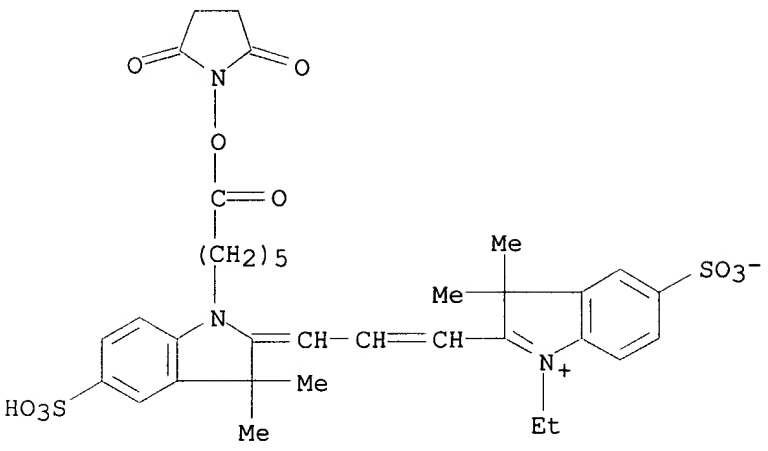




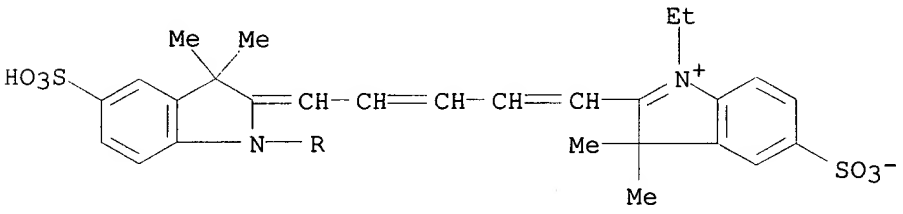
RE.CNT 3
RE
(1) Baer; US 5547849 A 1996
(2) Harris; US 5120953 A 1992
(3) Morrow; International Conference on AIDS 1990 V6(1), P207

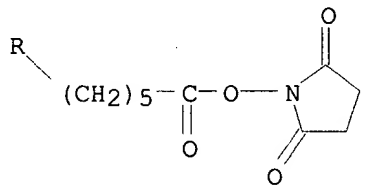
=> d bib abs hitstr 34

L55 ANSWER 34 OF 37 HCAPLUS COPYRIGHT 2000 ACS
AN 1998:672007 HCAPLUS
DN 129:339302
TI Separation and detection of cyanine-labeled amino acids by micellar electrokinetic chromatography **combined** with fluorescence detection using diode-based solid-state lasers
AU Kaneta, Takashi; Komatsubara, Takeshi; Shiba, Hiroki; Imasaka, Totaro
CS Department of Chemical Science and Technology, Faculty of Engineering, Kyushu University, Fukuoka, 812-8581, Japan
SO Anal. Sci. (1998), 14(5), 1017-1019
CODEN: ANSCEN; ISSN: 0910-6340
PB Japan Society for Analytical Chemistry
DT Journal
LA English
AB The detection of cyanine-labeled amino acids was demonstrated by laser induced fluorescence (LIF) using small solid-state lasers, such as a diode laser and diode laser-pumped YAG laser. These lasers have a sufficiently large power to use as an excitation source of LIF detection in electrokinetic chromatog. Two different cyanine derivs., Cy3 and Cy5, were used for the diode laser and the YAG laser excitation, resp. The detection limit for Cy3 was similar to that for Cy5. Thus, these lasers should be useful for the detn. of amino acids. Also, some cyanine derivs., the excitation maxima of which are in the deep-red region, are com. available. Thus, it is expected that diode LIF will be applied to the detn. of biol. samples and DNA sequencing.
IT **146368-16-3**, FluoroLink Mono Reactive Dye Cy3
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(FluoroLink Mono Reactive Dye Cy3; sepn. and detection of cyanine-labeled amino acids by micellar electrokinetic chromatog. **combined** with fluorescence detection using diode-based solid-state lasers)
RN 146368-16-3 HCAPLUS
CN 3H-Indolium, 2-[3-[1-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1-propenyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)



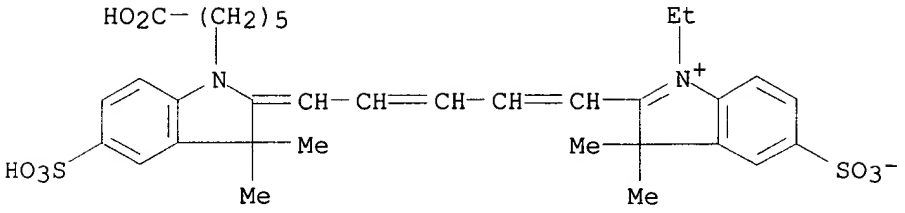
IT **146368-14-1**, FluoroLink Mono Reactive Dye Cy5
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(FluoroLink Mono Reactive Dye Cy5; sepn. and detection of cyanine-labeled amino acids by micellar electrokinetic chromatog. **combined** with fluorescence detection using diode-based solid-state lasers)
RN 146368-14-1 HCAPLUS
CN 3H-Indolium, 2-[5-[1-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1,3-pentadienyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)



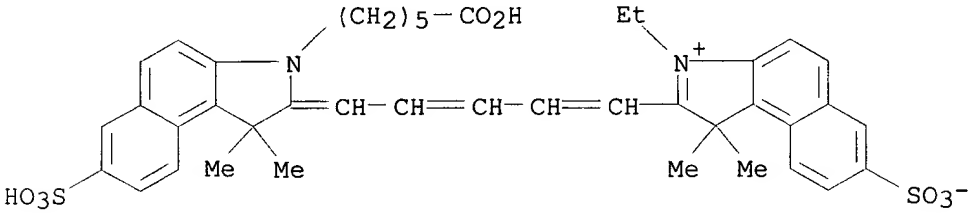


=> d bib abs hitstr 35

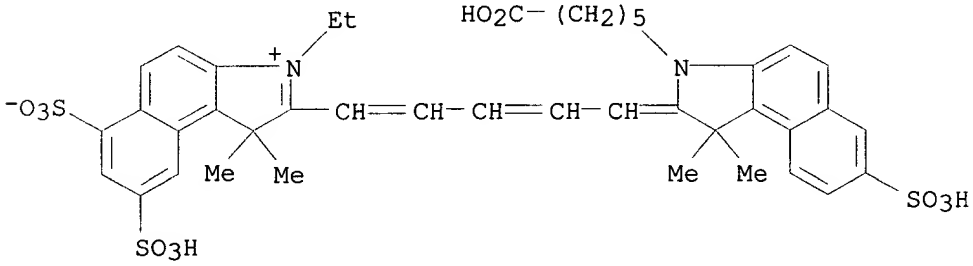
L55 ANSWER 35 OF 37 HCAPLUS COPYRIGHT 2000 ACS
AN 1998:412701 HCAPLUS
DN 129:145356
TI The influence of fluorescent dye structure on the electrophoretic mobility of end-labeled DNA
AU Tu, Oanh; Knott, Tim; Marsh, Michele; Bechtol, Kate; Harris, Dennis; Barker, David; Bashkin, John
CS Molecular Dynamics, Sunnyvale, CA, 94086, USA
SO Nucleic Acids Res. (1998), 26(11), 2797-2802
CODEN: NARHAD; ISSN: 0305-1048
PB Oxford University Press
DT Journal
LA English
AB Over the past 10 yr, fluorescent end-labeling of DNA fragments has evolved into the preferred method of DNA detection for a wide variety of applications, including DNA sequencing and PCR fragment anal. One of the advantages inherent in fluorescent detection methods is the ability to perform multi-color analyses. Unfortunately, labeling DNA fragments with different fluorescent tags generally induces disparate relative electrophoretic mobilities for the fragments. Mobility-shift corrections must therefore be applied to the electrophoretic data to compensate for these effects. These corrections may lead to increased errors in the estn. of DNA fragment sizes and reduced confidence in DNA sequence information. Here, we present a systematic study of the relationship between dye structure and the resultant electrophoretic mobility of end-labeled DNA fragments. We have used a cyanine dye family as a paradigm and high-resoln. capillary **array** electrophoresis (CAE) as the instrumentation platform. Our goals are to develop a general understanding of the effects of dyes on DNA electrophoretic mobility and to synthesize a family of DNA end-labels that impart identically matched mobility influences on DNA fragments. Such matched sets could be used in DNA sequencing and fragment sizing applications on capillary electrophoresis instrumentation.
IT **146368-11-8D**, DNA labeled with **210834-24-5D**, DNA labeled with **210834-25-6D**, DNA labeled with **210892-23-2D**, DNA labeled with
RL: PRP (Properties)
(influence of fluorescent dye structure on electrophoretic mobility of end-labeled DNA)
RN 146368-11-8 HCAPLUS
CN 3H-Indolium, 2-[5-[1-(5-carboxypentyl)-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1,3-pentadienyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)



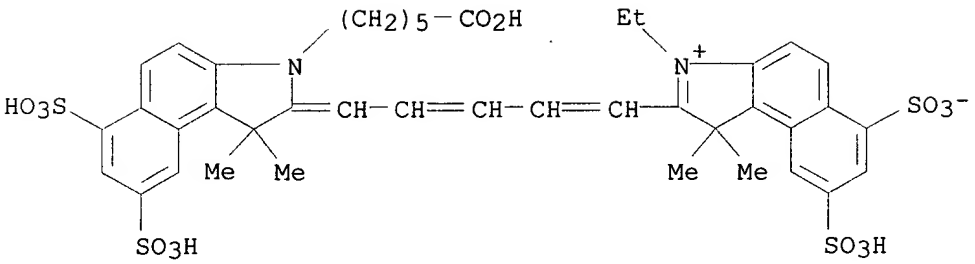
RN 210834-24-5 HCAPLUS
CN 1H-Benz[e]indolium, 2-[5-[3-(5-carboxypentyl)-1,3-dihydro-1,1-dimethyl-7-sulfo-2H-benz[e]indol-2-ylidene]-1,3-pentadienyl]-3-ethyl-1,1-dimethyl-7-sulfo-, inner salt (9CI) (CA INDEX NAME)



RN 210834-25-6 HCAPLUS
CN 1H-Benz[e]indolium, 2-[5-[3-(5-carboxypentyl)-1,3-dihydro-1,1-dimethyl-7-sulfo-2H-benz[e]indol-2-ylidene]-1,3-pentadienyl]-3-ethyl-1,1-dimethyl-6,8-disulfo-, inner salt (9CI) (CA INDEX NAME)



RN 210892-23-2 HCAPLUS
CN 1H-Benz[e]indolium,
2-[5-[3-(5-carboxypentyl)-1,3-dihydro-1,1-dimethyl-6,8-disulfo-2H-benz[e]indol-2-ylidene]-1,3-pentadienyl]-3-ethyl-1,1-dimethyl-6,8-disulfo-, inner salt (9CI) (CA INDEX NAME)

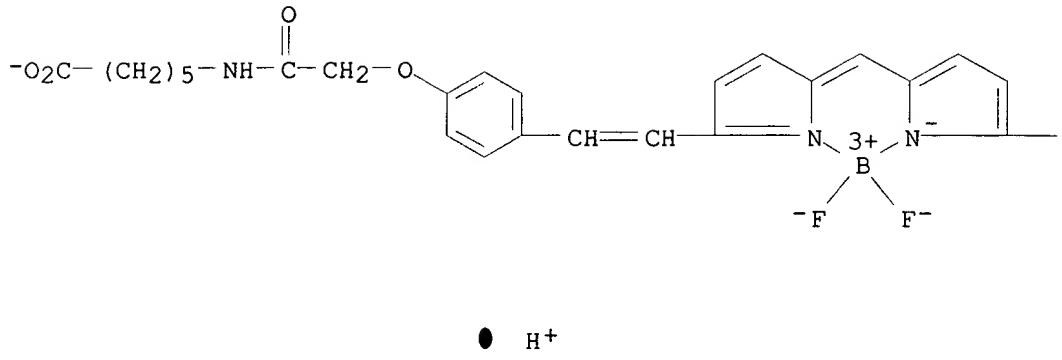

(CH2)5—CO2H
Et
N
N+
HO3S
CH—CH=CH—CH=CH
SO3-
Me
Me
Me
Me
SO3H
SO3H

=> d bib abs hitstr 36

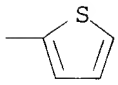
L55 ANSWER 36 OF 37 HCAPLUS COPYRIGHT 2000 ACS
AN 1998:312612 HCAPLUS
DN 129:78684
TI Time-resolved identification of individual mononucleotide molecules in aqueous solution with pulsed semiconductor lasers
AU Sauer, Markus; Arden-Jacob, Jutta; Drexhage, Karl H.; Gobel, Florian; Lieberwirth, Ulrike; Muhlegger, Klaus; Muller, Ralph; Wolfrum, Jurgen; Zander, Christoph
CS Physikalisch-Chemisches Institut, Universitat Heidelberg, Heidelberg, 69120, Germany
SO Bioimaging (1998), 6(1), 14-24
CODEN: BOIMEL; ISSN: 0966-9051
PB Institute of Physics Publishing
DT Journal
LA English
AB We applied a short-pulse diode laser emitting at 640 nm with a repetition rate of 56 MHz in **combination** with a confocal microscope to study bursts of fluorescence photons from individual differently labeled mononucleotide mols. in water. Two newly synthesized dyes, an oxazine dye (MR121) and a rhodamine dye (JA53), and two com. available dyes, a carbocyanine dye (Cy5) and a bora-diaza-indacene dye (Bodipy630/650), were used as fluorescent labels. The time-resolved fluorescence signals of individual mononucleotide mols. in water were analyzed and identified by a max. likelihood estimator (MLE). Taking only those single mol. transits which contain more than 30 **collected** photoelectrons, the two labeled mononucleotide mols., Cy5-dCTP and Bodipy-dUTP, can be identified by time-resolved fluorescence spectroscopy with a probability of correct classification of greater than 99%. Our results show that at least three differently labeled mononucleotide mols. can be identified in a common aq. soln. We obtain an overall classification probability of 90% for the time-resolved identification of Cy5-dCTP, MR121-dUTP and Bodipy-dUTP mols. via their characteristic fluorescence lifetimes of 1.05.+-.0.33 ns (Cy5-dCTP), 2.07.+-.0.59 ns (MR121-dUTP) and 3.88.+-.1.71 ns (Bodipy-dUTP).
IT **209340-49-8**, BODIPY 630/650
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(BODIPY 630/650; time-resolved identification of individual mononucleotide mols. in aq. soln. with pulsed semiconductor lasers)
RN 209340-49-8 HCAPLUS
CN Borate(1-), difluoro[6-[[[4-[2-[2-[[5-(2-thienyl)-1H-pyrrol-2-yl-

.kappa.N]methylene]-2H-pyrrol-5-yl-.kappa.N]ethenyl]phenoxy]acetyl]amino]hexanoato(2-)]-, hydrogen, (T-4)- (9CI) (CA INDEX NAME)

PAGE 1-A



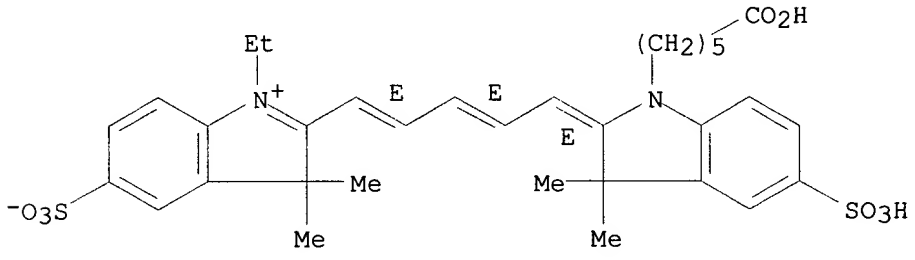
PAGE 1-B



IT **209340-51-2**
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(Cy 5; time-resolved identification of individual mononucleotide mols. in aq. soln. with pulsed semiconductor lasers)
RN 209340-51-2 HCAPLUS
CN 3H-Indolium,
2-[(1E,3E,5E)-5-[1-(5-carboxypentyl)-1,3-dihydro-3,3-dimethyl-

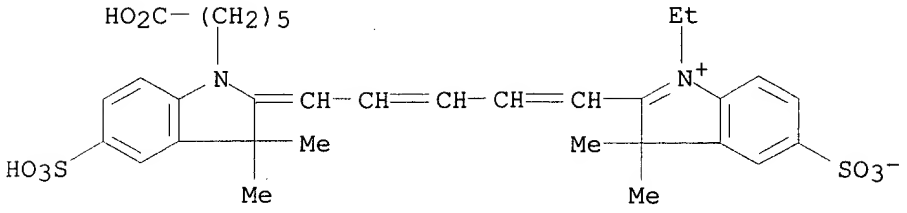
5-sulfo-2H-indol-2-ylidene]-1,3-pentadienyl]-1-ethyl-3,3-dimethyl-5-sulfo-
, inner salt (9CI) (CA INDEX NAME)

Double bond geometry as shown.



=> d bib abs hitstr 37

L55 ANSWER 37 OF 37 HCAPLUS COPYRIGHT 2000 ACS
AN 1997:753619 HCAPLUS
DN 128:124202
TI Efficient DNA sequencing with a pulsed semiconductor laser and a new fluorescent dye set
AU Muller, Ralph; Herten, Dirk P.; Lieberwirth, Ulrike; Neumann, Michael; Sauer, Markus; Schulz, Andreas; Siebert, Stefan; Drexhage, Karl H.; Wolfrum, Jurgen
CS Im Neuenheimer Feld, Physikalisch-Chemisches Institut, Universitat Heidelberg, 69120 Heidelberg, Germany
SO Chem. Phys. Lett. (1997), 279(5,6), 282-288
CODEN: CHPLBC; ISSN: 0009-2614
PB Elsevier Science B.V.
DT Journal
LA English
AB A new method is presented for automated one-lane four-dye DNA sequencing in capillary gel electrophoresis based on semiconductor technol. and a special set of multiplex fluorescent dyes which exhibit similar absorption and emission spectra but different fluorescent lifetimes. The primer sequencing reaction was applied in a confocal optical system. Detection and identification of the differently 5'-labeled primers was done by time-correlated single-photon counting and a specially developed pattern-recognition technique based on the characteristic fluorescence lifetimes of the fluorescent dyes used as labels. Efficient excitation was performed at 630 nm by a short-pulsed semiconductor laser with a repetition rate of 22 MHz and pulsewidth of about 500 ps (FWHM). With the new dye set, no mobility shift correction is required for a sepn. up to 350 base pairs during sepn. in a linear 5 PAA gel. This technique of multiplex-dye DNA sequencing shows potential for **high-throughput** DNA sequencing in parallel capillaries or microfabricated DNA sequencing chips.
IT **146368-11-8**, Cy 5
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(Cy 5; efficient DNA sequencing with pulsed semiconductor laser and new fluorescent dye set)
RN 146368-11-8 HCAPLUS
CN 3H-Indolium,
2-[5-[1-(5-carboxypentyl)-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1,3-pentadienyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)



=> d bib abs hitstr

L57 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2000 ACS
AN 2000:402040 HCAPLUS
DN 133:28254
TI Detection of biomaterial using polyamide or polysulfone membrane support and fluorescent-labeled binding agent
IN Dubitsky, Andrew; Decollibus, Damien
PA Pall Corporation, USA
SO PCT Int. Appl., 39 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| PI WO 2000034522 | A2 | 20000615 | WO 1999-US29000 | 19991206 |

W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRAI US 1998-111915 19981211
US 1999-392793 19990909
US 1999-163788 19991105

AB A method and system for detecting a labeled complex including biomaterial without stringency washing after complexing and/or without amplifying the label is disclosed. The method uses a polyamide or polysulfone membrane support and a fluorescent-labeled binding agent. Reverse dot blot assays for a .beta.-globin sequence and protein dot blots for mouse IgG were performed using various membranes and red fluorescent dye-labeled probes.

IT **146368-14-1D**, Cy5, end-labeled conjugates with oligonucleotide probes
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(Cy5; detection of biomaterial using polyamide or polysulfone membrane support and fluorescent-labeled binding agent)

RN 146368-14-1 HCAPLUS
CN 3H-Indolium, 2-[5-[1-[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl]-1,3-dihydro-3,3-dimethyl-5-sulfo-2H-indol-2-ylidene]-1,3-pentadienyl]-1-ethyl-3,3-dimethyl-5-sulfo-, inner salt (9CI) (CA INDEX NAME)